

THE FORGOTTEN AIRWAR: AIRPOWER IN  
THE MESOPOTAMIAN CAMPAIGN

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE  
Military History

by

PETER J. LAMBERT, MAJOR, USAF  
B.A., Norwich University, Northfield, VT, 1988  
M.A., Naval Postgraduate School, Monterey, CA, 1997

Fort Leavenworth, Kansas  
2003

Approved for public release; distribution is unlimited.

| REPORT DOCUMENTATION PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |                                                          | Form Approved OMB No.<br>0704-0188                         |                                                                                                                |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--|
| Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.                                                                                                                                                                  |                             |                                                          |                                                            |                                                                                                                |  |
| 1. REPORT DATE (DD-MM-YYYY)<br>06-06-2003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             | 2. REPORT TYPE<br>thesis                                 |                                                            | 3. DATES COVERED (FROM - TO)<br>05-08-2002 to 06-06-2003                                                       |  |
| 4. TITLE AND SUBTITLE<br>THE FORGOTTEN AIRWAR:<br>AIRPOWER IN THE MESOPOTAMIAN CAMPAIGN<br>Unclassified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                                                          | 5a. CONTRACT NUMBER                                        |                                                                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                                          | 5b. GRANT NUMBER                                           |                                                                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                                          | 5c. PROGRAM ELEMENT NUMBER                                 |                                                                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                                          |                                                            |                                                                                                                |  |
| 6. AUTHOR(S)<br>Lambert, Peter, J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |                                                          | 5d. PROJECT NUMBER                                         |                                                                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                                          | 5e. TASK NUMBER                                            |                                                                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                                          | 5f. WORK UNIT NUMBER                                       |                                                                                                                |  |
| 7. PERFORMING ORGANIZATION NAME AND ADDRESS<br>US Army Command and General Staff College<br>1 Reynolds Ave<br>Fort Leavenworth, KS66027-1352                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                             |                                                          | 8. PERFORMING ORGANIZATION REPORT<br>NUMBER<br>ATZL-SWD-GD |                                                                                                                |  |
| 9. SPONSORING/MONITORING AGENCY NAME AND ADDRESS<br>,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                          | 10. SPONSOR/MONITOR'S ACRONYM(S)                           |                                                                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                                          | 11. SPONSOR/MONITOR'S REPORT<br>NUMBER(S)                  |                                                                                                                |  |
| 12. DISTRIBUTION/AVAILABILITY STATEMENT<br>A1,Administrative or Operational Use<br>06-06-2003<br>US Army Command and General Staff College<br>1 Reynolds Ave<br>Ft. Leavenworth, KS66027-1352                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |                                                          |                                                            |                                                                                                                |  |
| 13. SUPPLEMENTARY NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                                                          |                                                            |                                                                                                                |  |
| 14. ABSTRACT<br>This thesis discusses the role of airpower in the Mesopotamian Campaign of World War I. Britain conducted military operations against Ottoman forces in Mesopotamia to defend Britain's oil interests and lines of communication, but also to open an additional front against the Turks. The battles conducted from the commencement of hostilities in November 1914 until the Turkish surrender in October 1918 were carried out with the use of a new technology on the battlefield--the aeroplane. This thesis explores the roles of airpower in the Mesopotamian Campaign, and what affect airpower had on military operations. The thesis also looks at the missions of the Royal Flying Corps in Mesopotamia, how they evolved during the course of the conflict, and what impact they had on post-war Royal Air Force development. The study concludes by determining airpower in the Mesopotamian Campaign influenced the policy of air control in the post-war British Empire, and positively influenced the perception of ground commanders to the value of airpower to ground maneuver. |                             |                                                          |                                                            |                                                                                                                |  |
| 15. SUBJECT TERMS<br>Airpower; Mesopotamian Campaign; World War, 1914-1918; Great Britain; Operational art; Royal Flying Corps; Technology; Transformation; Revolution in Military Affairs; Royal Air Force; Air-ground cooperation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                             |                                                          |                                                            |                                                                                                                |  |
| 16. SECURITY CLASSIFICATION OF:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             | 17. LIMITATION<br>OF ABSTRACT<br>Same as Report<br>(SAR) | 18.<br>NUMBER<br>OF PAGES<br>123                           | 19. NAME OF RESPONSIBLE PERSON<br>Buker, Kathy<br>kathy.buker@us.army.mil                                      |  |
| a. REPORT<br>Unclassified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | b. ABSTRACT<br>Unclassified | c. THIS PAGE<br>Unclassified                             |                                                            | 19b. TELEPHONE NUMBER<br>International Area Code<br>Area Code Telephone Number<br>9137583138<br>DSN<br>5853138 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             |                                                          |                                                            | Standard Form 298 (Rev. 8-98)<br>Prescribed by ANSI Std Z39.18                                                 |  |

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: Major Peter J. Lambert

Thesis Title: The Forgotten Airwar: Airpower in the Mesopotamian Campaign

Approved by:

\_\_\_\_\_, Thesis Committee Chairman  
Lieutenant Colonel K. Graham Fuschak, M.S.

\_\_\_\_\_, Member  
Lieutenant Colonel Thomas J. Toomer, M.A.

\_\_\_\_\_, Member  
Lieutenant Colonel Kevin W. Farrell, Ph.D.

Accepted this 6th day of June 2003 by:

\_\_\_\_\_, Director, Graduate Degree Programs  
Philip J. Brookes, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

## ABSTRACT

THE FORGOTTEN AIRWAR: AIRPOWER IN THE MESOPOTAMIAN CAMPAIGN  
by Major Peter J. Lambert, USAF, 123 pages.

This thesis discusses the role of airpower in the Mesopotamian Campaign of World War I. Britain conducted military operations against Ottoman forces in Mesopotamia to defend Britain's oil interests and lines of communication, but also to open an additional front against the Turks. The battles conducted from the commencement of hostilities in November 1914 until the Turkish surrender in October 1918 were carried out with the use of a new technology on the battlefield--the aeroplane.

This thesis explores the roles of airpower in the Mesopotamian Campaign, and what affect airpower had on military operations. The thesis also looks at the missions of the Royal Flying Corps in Mesopotamia, how they evolved during the course of the conflict, and what impact they had on post-war Royal Air Force development. The study concludes by determining airpower in the Mesopotamian Campaign influenced the policy of air control in the post-war British Empire, and positively influenced the perception of ground commanders to the value of airpower to ground maneuver.

## ACKNOWLEDGMENTS

First and foremost my thanks go to wife Courtney, who endured my weekend journeys to the library, and tolerated my life at the computer, ceaselessly toiling on this paper. Her patience was my saving grace, and for that I owe her my deepest thanks.

To LTC Fuschak, whose infinite patience with reviewing, editing, and general guidance made this paper possible. And thanks to Lt Col Toomer, whose insight on the early era of air theory and application was of great value in providing some context to the design of the thesis. And lastly to LTC Farrell, who provided some valuable situational awareness for the completion of this project.

To Mark Offord, whose assistance with research at the Public Records Office was most helpful, particularly with his patience in trying to determine what I really needed, vice what I thought I needed.

To Peter Wright from *Cross and Cockade* and the countless others from United Kingdom, whose assistance and advice were helpful in digging up the odd item from some long-forgotten resource.

To say that living in the modern era is a blessing is an understatement. The men who flew for the Royal Flying Corps during the Mesopotamian Campaign endured hardships that are hard to imagine today. Nevertheless, they suffered, endured, and persevered under extraordinary conditions. The fact that they were able to function in any manner is a testament to their fortitude. My hope is that this paper gives due credit to this “sideshow” and documents in its entirety this long-forgotten conflict.

## TABLE OF CONTENTS

|                                                        | Page |
|--------------------------------------------------------|------|
| THESIS APPROVAL PAGE .....                             | ii   |
| ABSTRACT .....                                         | iii  |
| ACKNOWLEDGMENTS .....                                  | iv   |
| ACRONYMS .....                                         | vi   |
| ILLUSTRATIONS .....                                    | vii  |
| CHAPTER                                                |      |
| 1. INTRODUCTION .....                                  | 1    |
| 2. BACKGROUND: WHY MESOPOTAMIA? .....                  | 5    |
| 3. BRITISH AVIATION PRIOR TO THE WAR.....              | 20   |
| 4. BASRA TO KUT AL-AMARA: NOVEMBER 1914-MAY 1916 ..... | 45   |
| 5. FROM DEFEAT TO VICTORY .....                        | 70   |
| 6. CONCLUSION .....                                    | 97   |
| ILLUSTRATIONS .....                                    | 105  |
| BIBLIOGRAPHY .....                                     | 108  |
| INITIAL DISTRIBUTION LIST .....                        | 114  |
| CERTIFICATION FOR MMAS DISTRIBUTION STATEMENT.....     | 115  |

## ACRONYMS

|              |                                                             |
|--------------|-------------------------------------------------------------|
| IEFD         | Indian Expeditionary Force ‘D’                              |
| GOC          | General Officer Commanding                                  |
| GOI          | Government of India                                         |
| <i>JUSII</i> | <i>The Journal of the United Service Institute of India</i> |
| MF           | Maurice Farman                                              |
| RFC          | Royal Flying Corps                                          |
| RNAS         | Royal Naval Air Service                                     |
| <i>RUSI</i>  | <i>The Journal of the Royal United Service Institution</i>  |
| Sdn          | Squadron                                                    |
| TSID         | Technical Subcommittee of Imperial Defense                  |

## ILLUSTRATIONS

| Figure                                      | Page |
|---------------------------------------------|------|
| 1. Map of Lower Mesopotamia .....           | 105  |
| 2. Map of Operations on the Tigris .....    | 106  |
| 3. Map of Operations North of Baghdad ..... | 107  |

## CHAPTER 1

### INTRODUCTION

Captains Kerring and King-Harmon are having a typical early morning flight in their two-seater “Voisin,” spotting for the British artillery. Flights this early in the morning are becoming the norm for Kerring as the blistering heat of the Mesopotamian summer ensures no activity takes place during the day. Coordination between the artillery and the aircraft is going exceedingly well this morning: Turk ammunition dumps have been hit, and troop formations noted. Overall a good day, but about to become a bit more exciting. Both Kerring and his observer King-Harmon note the “enemy aircraft” signal from their ground station, and immediately begin looking furiously for the enemy aircraft. Kerring finds the German machine moving to maneuver between the sun and his machine. The two machines pass within 150 yards of one another, both attempting to gain a better position. However the German machine is able to fire a few shots, hitting the rudder control of the British machine, forcing Kerring to make a controlled landing near the British airpark. Both Kerring and King-Harmon run from their damaged machine, jump into a new machine, return to the fight, and continue to successfully direct artillery on the enemy. A harrowing experience, but ultimately successful.<sup>1</sup>

The campaign is now operating on several fronts, yet no aerial reinforcements to support the multiple efforts. Wing Commander Lieutenant Colonel J. E. Tennant hears of complaints about the lack of adequate support from the air. Air support for the drive on Al-Kut and Baghdad had been easier; one front eliminated duplication of effort and allowed for an effective span of control of his machines by one air commander. Three fronts are now in play, with flights of machines detached to support each front, each

commanded by relatively junior officers who in turn are subordinate to the army staffs to which they are attached. Tennant's machines are a new technology for many of the infantry and cavalry officers who now find themselves organizing aircraft employment. The junior flight officers are growing increasingly frustrated by the orders of the army officers, which make their employment inefficient and uneconomical. Furthermore, Tennant knows the army staffs are not taking full advantage of what his machines can offer. Tennant believes that if he does not intervene as the senior Royal Flying Corps (RFC) representative, the situation will only grow worse. He decides to intervene with the staffs to ensure everyone is getting what they need, and moreover, clarify the utility of his machines. His efforts go to no avail with his army counterparts. He has no alternative but to seek counsel from the General Officer Commanding (GOC) of Mesopotamian Forces, General Maude, who is able to soothe over ruffled feathers, and bring a semblance of agreement between the army and air staffs.<sup>2</sup>

Enter a new revolution in technology--the airplane, flown for the first time just twelve years prior at Kitty Hawk, and not considered by Great Britain until 1908 as a technology worth pursuing. It is now 1914. War clouds loom and the Indian Government finds a total of four aircraft in the entire country, none of which are worthy of deploying to Mesopotamia.<sup>3</sup> Furthermore, if the Indian Government could spare any of the four aircraft from its North-Western Frontier, the materials on these obsolete machines would not stand up to the elements in Mesopotamia, and would be rendered useless. And what of trained pilots? The Indian Government will have to turn elsewhere to form the nucleus of what was to become the RFC's contingent in the Mesopotamian Theater. Surprisingly, the Indian Government turns to an unlikely source: Australia and New Zealand. These

two far-flung members of the British Empire will spearhead the nascent air effort until Britain and India can create a cadre of trained pilots and mechanics.<sup>4</sup>

Prior to 1914 the limited employment of the airplane had not forced significant doctrinal development. Yet during the course of the war, both in Europe and in the Middle East, an evolution took place transforming the use of the aircraft from strictly reconnaissance to directing artillery (with the onset of wireless radio), photographic reconnaissance, air-to-air combat, bombing and aerial resupply.<sup>5</sup> As the evolution in air power theory and doctrine transpired on the European continent, so did the evolution take place in the Mesopotamian Theater. Certain aspects of these missions were ground-breaking for the RFC in the Mesopotamian Campaign. Yet not only was an evolution taking place on the tactical employment of the airplane, but airmen in Great Britain such as Sykes and Trenchard were moving the evolutionary process forward on the theoretical employment and conduct of air power.

Much has been written on the war in the air over Europe, but as noted by a senior officer after the Campaign had concluded, the Mesopotamian Campaign was considered nothing but a “sideshow,” and little attention has been given to the employment of air power in this under-reported conflict. A closer look at this campaign will reveal air power had a role to play in the conduct of the campaign, and materially affected post-war policies. Startlingly, issues initially discussed, debated and argued over in the World War I-era remain today. Practitioners of military operational art, today’s leaders and senior officers, should take note of the conduct of this campaign to avoid repeating the mistakes of the men who fought in this forgotten air war of World War I.

---

<sup>1</sup>Lieutenant Colonel John E. Tennant, *In the Clouds Above Baghdad* (London: Cecil Palmer, 1920), 41-42.

<sup>2</sup>*Ibid.*, 122-124.

<sup>3</sup>Brigadier General F. J. Moberly, *The Campaign in Mesopotamia 1914-1918 Vol. 1* (London: HMSO, 1923), 63. Moberly's four-volume set is still considered the definitive source on the Mesopotamian Campaign. Moberly was commissioned by the Government of India to write the definitive history of the campaign.

<sup>4</sup>F. M. Cutlack, *The Australian Flying Corps in the Western and Eastern Theatres of War, 1914-1918* (Sydney: Angus and Robertson LTD., 1923), 2-3.

<sup>5</sup>Walter Raleigh, *The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force Vol. 1* (Oxford: Clarendon Press, 1922), 8-11.

## CHAPTER 2

### BACKGROUND: WHY MESOPOTAMIA?

The professional journal for British military officers serving in India, *The Journal of the United Services Institution of India (JUSII)*, had no discussion of Mesopotamia in 1914. Indeed, a review of issues throughout the year would not indicate the potential for impending military operations in the area. The October journal noted the outbreak of war in Europe, gave an engaging discussion of the latest British Antarctic expedition, and had a fairly technical article on “Notes on Aircraft,” which opined, “it appears at any rate that we are on the verge of important developments in aerial warfare and it is necessary to give the matter serious thought.”<sup>1</sup> Captain M. Crofton, Royal Horse Artillery, published a study of the Balkan conflicts and Turkish military accomplishments. Of the ability of the Turks he stated, “The Turkish soldier is physically well developed, a good though slow marcher, fearless and possesses an instinct of duty and subordination to authority which is engrained in him by his religion. He is lacking smartness, initiative and dash and is best behind entrenchments.”<sup>2</sup> Yet still no discussion on anything related to the Middle East. In fact, the latest reference to the area had been published anonymously in January 1914, and focused solely on Persia and its importance as a buffer state to the security of India. No mention of oil or the security of the Persian oilfields. No mention of encroaching European interests in the Persian Gulf. And no mention of forces in India readying for war, or for that matter, any inkling of London’s concern for the developing situation in the Persian Gulf area.

Clearly, in August 1914, all eyes were focused on Europe. With such dedication of men and resources to Europe, what were Great Britain’s concerns with Mesopotamia,

and what were Turkey's interests in the region? Britain's strategic interests in Mesopotamia revolved primarily around three areas of concern: expanding foreign (German) economic interests in the area that had offered Britain most-favored nation status; oil; and lastly strengthening Arab-British relations.<sup>3</sup>

German economic influence had been growing within the Ottoman Empire, and Germany was seen as an influential financier with ulterior commercial (and possibly geopolitical) motives behind Turkish plans for the construction of the Baghdad Railway. As early as 1903, Lord Curzon, Viceroy of India, stated,

It is a foundation principle of British policy that we cannot allow the growth of any rival or predominant political interest in the waters of the Gulf. . . . But if the Turkish Government is resolved on building of the railway in so far as it lies within its own territory . . . then I think His Majesty's Government are entirely entitled and are bound to enter a discussion.<sup>4</sup>

The possibility of a German intrusion on Britain's sphere of influence ensured Britain's negotiations with Turkey for the terminus of the railway from Baghdad in Basra. Britain believed that if it were not involved with the construction of the line, particularly in the Basra area in southern Mesopotamia, the line would eventually offer Germany a potential base for military operations in this area of British influence. However, Britain's Foreign Secretary saw German intrigue behind the railway, and coupled with German economic activities in southwest Africa, raised a flag of concern regarding its potential impact on British worldwide economic activities. Indeed, Germany did view the railway as an extension of a proposed Berlin to Baghdad line, which could divert trade from sea-lanes controlled by Great Britain, to land routes to Germany.<sup>5</sup>

Oil, and in particular British oil concessions in Persia were an additional strategic interest in the area. Britain had pursued oil concessions in Mesopotamia, but at the advent

of the war, Abadan in Persia remained the primary focal point for oil to Britain. The Abadan refineries offered the British Royal Navy, which was converting from coal to oil, a British-controlled supply. As early as January 1914, security for the oil fields had been discussed in London. Sir Percy Cox, the Persian Gulf Chief Political Officer, reported to the Admiralty that between two brigades and a division would be necessary to secure the facility in times of trouble. Ironically, Sir Winston Churchill, then First Lord of the Admiralty, believed as late as September 1914 that no troops could be provided for the area because “Europe and Egypt have greater claims than we on the Indian Army.”<sup>6</sup> Despite Churchill’s misgivings about troops to protect the facility, the British Foreign Office quietly assured the Anglo-Persian Oil Company of Britain’s and India’s resolve to defend the complex in the event of conflict.

Lastly, Britain’s position *vis-à-vis* the Arabs was the last major strategic pillar for Great Britain in Mesopotamia. Arab relations were important to maintain British influence in the area, and to avoid a much-feared Islamic jihad against British interests in the Gulf Region. Specifically the potential negative affect it could have on British Muslim subjects throughout the Empire, particularly in India, and could have far reaching consequences for the stability of the Empire. As early as 1908, a British official noted the potential of a resurgent Pan-Islamic movement from within the crumbling Ottoman Empire, “I think . . . that this Pan-Islamic movement is one of our greatest dangers in the future, and is indeed far more of a menace than the “Yellow Peril.”<sup>7</sup> Sir Arthur Hirtzel, the Political Secretary at the India Office noted the potential impact on India and stated,

The political effect in the Persian Gulf and in India of leaving the head of the Gulf derelict, will be disastrous, and we cannot afford, politically, to acquiesce in such a thing for an indefinite period while the main issues are being settled elsewhere

. . . though under German officers it may not be wholly effective, but it will be worked for all it is worth for the sake of political effect which the Turks and Germany hope to produce through it on Muslim feeling in India.<sup>8</sup>

However, as war approached, the proximity of Arabia and Mesopotamia to India and the potential of Turkey's release of control in the area had a growing importance to London. An additional fear of a power vacuum in the region of Mesopotamia might interest Persia, or even Russia to fill the political void. Nevertheless, Britain wanted to ensure the Arabs would remain pro-British, and would not agitate and endanger the British relationship with its Muslim subjects.<sup>9</sup>

British concerns of an Islamic uprising did indeed have a foundation. On 2 August 1914, German General von Moltke urged the German Foreign Ministry to agitate the Muslim populations of India and Egypt, and ultimately throughout the Middle East and Muslim population centers in Africa. German influence within the Ottoman Empire ultimately paid dividends when on 14 November, the senior Islamic cleric of the Ottoman Empire, in the presence of the Sultan in Constantinople, issued the declaration of a Holy War against France, Britain and Russia.<sup>10</sup>

Turkey's strategic interests in Mesopotamia rested on a historical foundation of Mesopotamia as part of the greater Ottoman Empire. The Ottomans had administratively divided Mesopotamia into three *vilayets* (regions): Mosul, Baghdad and Basra. Of these, Basra was within Britain's sphere of influence, based on negotiations conducted with the Turks. Administrative control was tenuous throughout the *vilayets*, and generally only effective in the larger towns. Turkish administrators were responsible for collecting taxes for their respective *vilayets*, and if this was done in a timely manner, Constantinople maintained a very *laissez-faire* attitude with Mesopotamia's administration.<sup>11</sup> As if to

underscore the Ottoman's lack of concern with Mesopotamia on the eve of World War I, the Turks had shifted the majority of the 12th and 13th Army Corps (minus one division) to Syria and Anatolia, where the Turkish and German staff officers felt a British military operation was more likely.<sup>12</sup> Turkey relied on local *gendarmerie* and one division of Ottoman forces at the onset of the war to cover the entire Mesopotamian region.

The lack of concern also extended politically and administratively. In 1908, the Ottoman Empire welcomed a constitutional upheaval bringing with it new political and economic reforms. Yet in Mesopotamia, Moberly noted, "the year was marked by more than the usual degree of insecurity and lawlessness." Moberly also remarked that the Ottoman administrators in the *vilayets* of Baghdad and Basra not only ignored local turmoil in their respective regions, but also overtly advocated anti-British sentiments.<sup>13</sup>

Strategically, Mesopotamia provided the most direct approach from southern and central Europe to southwest Asia. However, Turkey and Germany viewed the great distances involved, coupled with the incomplete status of the primary lines of communication from Anatolia, as a significant impediment to maintaining a large number of troops in the region. Moreover, the extreme climates and southern Mesopotamia's vulnerability from the Persian Gulf area also discouraged the movement of troops from more strategically vital areas within the Empire to Mesopotamia at the onset of the war. However, Mesopotamia did have some positive attributes: Baghdad could serve as a focal point from which to foment unrest in Persia and Afghanistan, as both shared a border with India. Likewise, a relatively small number of Turks could expect to hold the attention of a much larger number of British based on Britain's concern with its oil supplies and keeping a lid on Arab unrest.

Despite the vast, arid wastes of the desert, the inhospitable climate, flooding, dust storms, and an unruly populace, Mesopotamia laid astride a strategically significant area of the Middle East. Great Britain, Turkey and Germany would be willing to sacrifice blood and treasure to maintain their respective interests in the area at the onset of World War I.

Europe had descended into war, but in the Middle East, British prospects looked a lot brighter. India's borders with Persia were relatively stable, and more importantly, British oil interests in the Anglo-Persian Oil Company, and specifically, the Abadan refinery complex, were forecast to begin yielding a significant profit.

Additionally, Britain had achieved some impressive diplomatic results in the Middle East, despite the growing tension between the Turkish Government and Great Britain elsewhere. As early as 1913, Britain had nurtured the *de facto* independence of the Sheik of Kuwait, who was a *de jure* subject of the Ottoman Empire. In March 1913, Turkey and Great Britain signed an accord in which the Turks recognized the "special position" of Great Britain in the Persian Gulf and southern Mesopotamia, and also agreed to not interfere with the Sheiks of Kuwait.<sup>14</sup> Yet Mesopotamia, and more importantly to the British, southern Mesopotamia, continued to see its share of tribal disorder, but not significant enough to threaten the Abadan complex.

Ironically, prior to the commencement of hostilities in November 1914, Britain and Turkey had been engaged in discussions along a number of diplomatic fronts, to include the terminus of the Baghdad railway; a demarcation of the Turkish-Persian frontier; discussions centered on the navigation of the Tigris and Euphrates Rivers, and the political status quo in the Persian Gulf area.<sup>15</sup>

However, from the beginning of 1914, it is still a matter of conjecture if Turkey was actively seeking an alliance with Germany. Turkey remained a wild card *vis-à-vis* the great powers' network of alliances in Europe and Asia. Moreover, Turkey, still reeling from its losses in Balkan conflicts, tended to be looking locally for recovery of lost territories and for protection from the Russians. After a number of unsuccessful attempts to arrange alliances with the British and French, the Turks looked to Germany. Turkish officials believed (without any insight into Berlin's strategic plans) that since Germany had not been on the receiving end of the land grab engendered by the Balkan conflicts, at Ottoman expense, it might not have had designs on Anatolia. Nor was Germany a significant Mediterranean or Asiatic power and would not be in a position to exert influence militarily with the Turks. Additionally, Germany had no Muslim colonies to create a schism in Ottoman influence over its Islamic subjects. Germany, up to this time, had looked upon Turkey in primarily commercial terms. Turkey viewed this as a satisfactory state of affairs, for if German economic concerns were threatened by Britain, France or Russia, Germany would likely be willing to defend those interests. An alliance with Germany would also provide Turkey with a powerful continental ally, which might pay dividends in the future in the Balkans.<sup>16</sup>

Commercial interests within the Ottoman Empire notwithstanding, Germany had been relatively influential within the Empire for a number of years, particularly within the Turkish military. German influence within the Turkish military reached its pinnacle with the introduction of General Liman von Sanders to command a Turkish Corps in October 1913. Previous to von Sanders' appointment, German officers had served in advisory capacities. This new turn of events, coupled with instructions from Berlin for von

Sanders to “Germanize” the Turkish army caused Britain’s ally Russia considerable concern.<sup>17</sup> On 2 August 1914, Turkey and Germany signed a secret treaty, providing for Turkish military assistance to Germany if the Central Powers’ actions led to war with Russia.<sup>18</sup> Despite the still-secret treaty, the Turks were unsure of how public opinion would reflect the Ottoman Empire’s new pact with Germany. However, Turkish public opinion would soon be won over by the Turkish government based on Britain’s actions. In a twist of irony, von Sanders as head of the German Military Mission in Constantinople was unaware of the secret deal struck between Berlin and Constantinople, and would not be informed about it until just prior to the commencement of hostilities.<sup>19</sup>

Unwittingly, Britain provided the Turks their spark to turn the tide of public opinion. On 29 July, Britain confiscated two Turkish warships under construction in Great Britain, which caused public pandemonium in Constantinople, partially fueled by a clever Turkish and German disinformation campaign. However, the uproar was more attuned to the widespread anticipation of the arrival of the two ships. The Turkish government had planned a “Navy Week,” and even thousands of Ottoman children had contributed to the funding of the ships.<sup>20</sup> First Lord of the Admiralty Churchill, who ordered the seizure, had acted within the legalese of the contract based on the growing threat of the German Navy in the North Sea. Churchill made the move and claimed, “The Turkish battleships were vital to us. With a margin of only seven Dreadnoughts we could not afford to do without these fine ships.”<sup>21</sup> However, he was not aware of the German-Ottoman pact, which would be signed within the next couple of days: “Of this treaty we knew nothing. All of our reports were of an entirely different tenor; nor was it till long afterward that we learnt the true attitude of Turkey at this hour.”<sup>22</sup>

Nevertheless, Great Britain continued to attempt a series of diplomatic activities to encourage Turkish neutrality, but ultimately the facts on the ground outpaced diplomacy. Two German cruisers (the *Goeben* and *Breslau*) had evaded the British Mediterranean fleet, and anchored in Turkish waters on 10 August to be guided into Constantinople under Turkish protection. Great Britain protested this violation of the international laws of neutrality, and thus began the downward spiral of Ottoman-British relations.<sup>23</sup> Turkey declared the ships were merely being sold to the Turkish Fleet by Germany, despite the fact that the ships remained with German crews and in command of a German Admiral. The deceit of the sale was accepted by Britain if only to minimize the importance of the event geopolitically, and to maintain overt Turkish neutrality. To minimize the impact of the event, a British official even quipped, “As we shall insist that the *Goeben* shall be manned by a Turkish instead of a German crew, it doesn’t much matter: as the Turkish sailors cannot navigate her--except on to rocks or mines.”<sup>24</sup>

Following the collapse of Turkish-British relations in late August, the populace of Baghdad, under Turkish martial law grew restless, particularly in light of the overt anti-British sentiments espoused by Turkish officials.<sup>25</sup> British reports from Basra echoed the concerns from consular officials in Baghdad. Indeed, Basra further reported the closure of the Tigris to British ships, and plans were uncovered for emissaries from Mesopotamia to go to India to agitate the Muslim populace against Great Britain. The Government of India also received disturbing reports from Mesopotamia regarding mobilization activities in Baghdad. Reports of a call for up to 30,000 men from the *vilayets* of Baghdad and Basra and a further 30,000 from Mosul were noted.<sup>26</sup>

While as previously noted, the start of military operations in Mesopotamia was swift. The planning for military operations in southern Mesopotamia extended back to August, where the India Office in London sought to prepare a force “for safeguarding the refinery in case of an attempt being made to interfere with it.”<sup>27</sup> Towards the end of September, as pressure continued to mount between Turkey and Great Britain, Sir Edmund Barrow, Military Secretary of the India Office circulated a memo, which suggested Britain should take the first military step in the Persian Gulf region, by sending an Indian force to occupy Basra.

This seems the psychological moment to take action. So unexpected a stroke at this moment would have a startling effect; 1) It would checkmate Turkish intrigues and demonstrate our ability to strike. 2) It would encourage the Arabs to rally to us and confirm the Sheiks of Muhammerah and Koweit [sic] in their allegiance. 3) It would safeguard Egypt and without Arab support invasion is impossible. 4) It would effectively protect the oil installation at Abadan. Such results seem to justify the proposed action.<sup>28</sup>

By all accounts, the protection of the refineries at Abadan was of paramount concern. The British Admiralty relied upon the refinery for naval fuel and by-products for explosives. But as noted by Sir Edmund Barrow, the intent of sending a signal to Turkey, and likewise to Germany, of the resolve of Britain to defend her lines of communication was of more import in the mind of military planners. This mode of thought is reinforced by the lack of a comprehensive plan for the protection of Abadan, which was not finalized until 22 October 1915.<sup>29</sup>

Churchill called for action against the Ottoman Empire in September 1914. By early September, he had initiated planning for the seizure of the Straits, and moreover, had instructed the British Fleet to sink the *Goeben* and *Breslau*, “no matter what flag they fly, if they come out of the Dardanelles.”<sup>30</sup> By 25 September Churchill had authorized the

British Navy to attack any Turkish ship, and following the 26 September closure of the Straits to allied shipping, Britain began their blockade of Turkey on 2 October.<sup>31</sup>

Meanwhile, German pressure continued to mount for Turkey to intervene in the escalating European conflict. German influence within the Turkish military continued to grow, with Admiral Souchon (formerly commanding the *Goeben* and *Breslau*) now appointed Vice-Admiral in command of the Turkish Fleet. Souchon prepared for action in the Black Sea to prod Turkey into the conflict.<sup>32</sup> German influence culminated with the Turkish Fleet (primarily the *Goeben* and *Breslau* now reflagged and renamed as the *Yavuz Sultan Selim* and *Midilli*) initiating actions in the Black Sea against the Russian Fleet and the bombardment of Sevastopol, Odessa and two other cities on 28 October.<sup>33</sup> Britain summarily dropped diplomatic relations on 30 October. Churchill then ordered the bombardment of the Dardanelles, and with the Royal Navy's initiation of hostilities in the Straits by 3 November, Britain declared war on the Ottomans on 5 November.<sup>34</sup>

The rapid tempo in the sequence of events leading up to Britain's declaration of war against the Ottoman Empire left Turkey looking for their next move. Military readiness in Mesopotamia had not been a primary consideration for Turkey. Indeed, it had been seconded to preparations in the north, and the four divisions located in Mesopotamia had been gutted to bolster other units in Syria, the Caucasus and Anatolia. These units also had the distinction of being the least affected by military modernization plans enacted by von Sanders' staff.<sup>35</sup> However, after the outbreak of war in Europe, Constantinople realized that a presence would be required in Mesopotamia. By mid-August, a Turkish gunboat had positioned itself in the vicinity of Basra. Reports circulated of German attempts to scuttle a vessel in the mouth of the Shatt-al-Arab to

block access to this vital waterway. By September, elements of the residual Turkish forces in Mesopotamia moved towards southern Mesopotamia and took up positions, which threatened access to British ships in the region. The senior British naval officer in the area noted “There are eight thousand troops at Basra, normal number should be approximately one thousand. A certain amount of troop movement up and down river noticeable.”<sup>36</sup> By October, the Turkish Minister of War warned the Turkish administrator of Basra to prepare for war against Britain.<sup>37</sup>

Britain’s ambassador to Constantinople held the expectation prior to the Black Sea naval action that Turkey would not seek battle “simply to gratify the vanity of a fatuous young idiot like Enver and a mad German general like Liman.”<sup>38</sup> However, within a week after the Sevastopol incident, Indian Expeditionary Force ‘D’ (IEFD) was deployed to the Turkish-controlled Mesopotamian Fao Peninsula on the mouth of the Shatt-al-Arab waterway in the Persian Gulf. Britain was prepared to go to war in Mesopotamia.<sup>39</sup>

The decision to engage the Turks in Mesopotamia was a calculated one. Britain, already heavily committed in Europe, Africa and Asia, did not relish the idea of opening yet another front. However, Britain’s strategic interests were of paramount concern. While Britain attempted to persuade the Turks to maintain their neutrality, ultimately the Turks fell sway to German influences, and entered the war as an ally of Germany. The stage was now set for a multi-year campaign in Mesopotamia. And as in Europe, Britain would utilize a new technological innovation, the airplane, to aid its efforts.

---

<sup>1</sup>Captain J. A. G. Chamier, "Notes on Aircraft," *The Journal of the United Services Institution of India* XLIII (October 1914): 572.

<sup>2</sup>Captain M. Crofton, "The Study of the War in the Balkan Peninsula, 1912," *The Journal of the United Services Institution of India* XLIII (October 1914): 201.

<sup>3</sup>Paul K. Davis, *Ends and Means: The British Mesopotamian Campaign and Commission* (Cranbury, NJ: Associated University Presses, 1994), 32.

<sup>4</sup>Moberly, 40-41. Viscount Morley, an MP, and later Secretary of State for India echoed this sentiment, "His Majesty's Government cannot legitimately object to the construction of any railway in Turkish territory, but they cannot directly or indirectly facilitate the construction of those railways if their completion is to alter the existing position in Mesopotamia to the detriment of British interests and to the exclusion of British participation on reasonable terms." And concluded, "The military and strategic aspects are among a whole congeries of elements that go towards the complication of questions of enormous importance both to the political and commercial future of this country, and therefore the world."

<sup>5</sup>Davis, 33-34.

<sup>6</sup>Davis, 38.

<sup>7</sup>Hew Strachan, *The First World War*, vol. 1, *To Arms* (NY: Oxford University Press, 2001), 660; quoted from Joseph Heller, *British Policy Towards the Ottoman Empire 1908-1914* (London, 1983), 39.

<sup>8</sup>Sir Arnold Wilson, *Loyalties Mesopotamia 1914-1917* (London: Oxford University Press, 1930), 4.

<sup>9</sup>Strachan, 674. Moberly notes in retrospect "The power of the Turco-German combination to originate, organize and direct such a movement against us was accordingly one of the main dangers against which we had to guard." Moberly, 36.

<sup>10</sup>Strachan, 696-702; Liman von Sanders, *Five Years in Turkey* (Annapolis: United States Naval Institute, 1927; reprint, Berlin: August Scherl, 1920), 34-35. In von Sanders' opinion the declaration of a holy war was unnecessary. Von Sanders believed the Anatolian soldier would fight bravely regardless of the Islamic call to arms. However, the Arabs, he believed, were still distrustful of their Turkish overlords, despite serving under them.

<sup>11</sup>Moberly, 13.

<sup>12</sup>Ibid., 352. quoting a summary of the pamphlet “The Turco-British Campaign in Mesopotamia and our Mistakes,” by Staff Bimbashi Muhammad Amin; published by the Turkish General Staff nd.

<sup>13</sup>Moberly, 37.

<sup>14</sup>Harry N. Howard, *The Partition of Turkey: A Diplomatic History 1913-1923* (Norman: University of Oklahoma Press, 1931), 51.

<sup>15</sup>Wilson, 3.

<sup>16</sup>Strachan, 667-669.

<sup>17</sup>Strachan, 60. The tradition of German military officers training the Turkish military dates back to the 1830s, with von Moltke the Elder. The uproar caused by von Sanders’ appointment forced the Turks to move von Sanders from a command to the Inspector General of the Turkish Army. Von Sanders has an interesting perspective of the furor over his appointment in *Five Years in Turkey*.

<sup>18</sup>Stanford J. Shaw and Ezel Kural Shaw, *History of the Ottoman Empire and Modern Turkey*, vol. II, *Reform, Revolution and Republic: The Rise of Modern Turkey, 1808-1975* (NY: Cambridge University Press, 1977), 311. Austria-Hungary joined also joined the German-Turkish Alliance on 5 Aug. Germany and Austria declared war on Russia on 6 Aug.

<sup>19</sup>Liman von Sanders, 22-23.

<sup>20</sup>Ibid.

<sup>21</sup>Winston Churchill, *The World Crisis* (NY: Charles Scribner and Son, 1923), 221.

<sup>22</sup>Churchill, 266.

<sup>23</sup>Davis 19. Also see Churchill, 271. Of the ships going to Turkey, Churchill remarks “. . . the Goeben . . . on an unobstructed course to the Dardanelles carrying with her for the peoples of the East and Middle East more slaughter, more misery and more ruin than has ever before been borne within the compass of a ship.” Of course, written with the knowledge of events subsequent to the war in 1923.

<sup>24</sup>Strachan, 650-651.

<sup>25</sup>Wilson, 4.

<sup>26</sup>Moberly, 77.

<sup>27</sup>Davis, 31, quoting from Adm to IO, memo no. MO1496, 25 Aug 14, FO/2136/43049.

<sup>28</sup>Narrative of Operations in Mesopotamia 7 June, 1921, Air 1/674 Public Records Office (PRO).

<sup>29</sup>Davis, 32.

<sup>30</sup>Churchill, 536.

<sup>31</sup>Strachan, 673-674; Churchill, 536-537.

<sup>32</sup>Davis, 24.

<sup>33</sup>Davis, 29; Strachan 678; von Sanders, 32. To complete the reflagging of the vessels, the German officers and crews even donned Fezzes.

<sup>34</sup>Strachan, 680.

<sup>35</sup>Strachan, 689.

<sup>36</sup>Moberly, 85.

<sup>37</sup>Davis, 45; Moberly, 89.

<sup>38</sup>Davis, 48; Moberly, 84. Moberly notes it was the opinion of some that Turkish troop movements to the south were directed at the Arabs and not the British. Enver Pasha, one of the “Young Turks,” rose to power after staging a coup on 23 January 1913, and was appointed Minister of War in 1914.

<sup>39</sup>“Force D” had been dispatched earlier in the month to Bahrain, as a trump card in the event of the outbreak of hostilities with the Turks in Mesopotamia.

## CHAPTER 3

### BRITISH AVIATION PRIOR TO THE WAR

Lieutenant Lancelot Gibbs was an early convert to the promise of the aeroplane. His training in France had ingrained in him a spirit towards aviation that could only be characterized as messianic. Gibbs wanted to display the potential of his machine, and possibly to launch the same spirit of flight in others. Accordingly, he shipped his aeroplane at his own expense to Bilbao, Spain in April 1910 for a demonstration to the local populace for the general advancement of aviation. The delay in the arrival of his machine fueled discontent amongst the 30,000 people waiting to see this marvel from Great Britain. Moreover, once the machine arrived, Gibbs had to reassemble it to get it into working order, creating further delay and resentment. Once put together, the machine was wheeled out of its shed and shown to the crowd. The resentment now turned to chaos. The anxious crowd rushed Gibbs, who retreated with his machine back to the shed, angering the crowd still further. Those amongst the crowd began to decry the possibility of manned flight, and cursed Gibbs. The crowd pelted Gibbs with rocks, and even threatened him with a knife. A chant arose in the crowd, "Down with science, long live religion!" The intercession of the local constabulary saved Gibbs life, but his machine was torched and burned to the ground.<sup>1</sup>

While Gibbs' story is not representative, it does remind one that powered flight had only been demonstrated for the first time in December 1903, and was very much a novelty. Even as late as six years prior to World War I, Great Britain would be slow to grasp the idea of a military application for this new technology.

With no practical military experience and no theoretical evolution, what was the state of Great Britain's military aviation on the eve of the war? How would this affect Britain's performance from an air perspective in 1914? Post-war theorists such as Douhet, Mitchell, Trenchard and Slessor had not yet formulated their visions of how airpower could be effectively applied on the battlefield. Yet a few vocal critics in Britain during the pre-war era argued that to fail to invest in this industry would put the United Kingdom at a military disadvantage. The vocal few wanted an airpower arm, albeit smaller than its European peers, but organized and provided with a doctrinal template for integrated support to military operations.

British military forces had experimented with balloons as early as 1884. In Bechuanaland a balloon detachment of the Royal Engineers was deployed to support ground forces. Unfortunately for the advocates of balloon technology, there was no fighting, and to compound matters, the Royal Engineers had difficulty in providing the proper mix of gases for the higher elevations. However, in 1885 balloons were used to some effect in British operations in the Sudan, where the balloons "proved useful to reconnaissance."<sup>2</sup> The South African War in 1889 saw an expanded use of the balloons for reconnaissance, with four balloon sections deployed; yet ground commanders did not take full advantage of the balloon. The ground commander's lack of use of balloons can be ascribed to the lack of training and cooperation between ground elements and the Royal Engineers' balloon sections. Specifically, artillery had not been trained to work with balloons, and no systematic plan had been developed to coordinate signaling between the balloons and ground elements.<sup>3</sup> The lack of cooperation would soon resurface with the introduction of the aeroplane.

Early American aviation pioneers brought their technology to Britain for demonstrations, and for the hope of securing contracts. However, between 1906 and 1908, the Wright Brothers were denied three times by the War Office and Admiralty for their concept of an aeroplane.<sup>4</sup> Burned by their efforts to sell this technology to the English, the Wrights turned to France, where they demonstrated their machine and sought a military contract for an army aeroplane.<sup>5</sup> While the French spoke highly of the demonstration, they did not commit. French aviation pioneers however were impressed and the early developers of French aviation, such as Henri Farman, began their own industries based on the Wright's concepts.<sup>6</sup>

As early as 1906, Prime Minister Sir Henry Campbell-Bannerman approved of "The Advisory Committee for Aeronautics," launching Britain officially into the investigation of this new technology. The committee was formed to investigate the feasibility of "aeronautics." It consisted of leading military, civilian and academic personages, including "aeronauts" to provide first-hand experience to support the committee's research.<sup>7</sup>

While France and Germany embarked on ambitious programs for their aeroplanes and lighter-than-air ships, Great Britain was content with "a few balloons" operated by the Royal Engineers, whose balloons were still not held in very high regard by the army.<sup>8</sup> Indeed, one of the earliest public references to air operations by the military consisted of a German translation on the use of balloons and motorized airships to support naval operations.<sup>9</sup> Germany believed the airship (zeppelin) gave them the sovereignty of the air, but this alone was not sufficient. Germany noted advances in French aeroplane development, and soon directed investment towards aeroplane research and development.

Yet Great Britain did not yet entertain the idea of government sponsorship of aviation as a practical effort. Early English enthusiasts of aviation had to cross the Channel to France to get experience and learn the trade. As late as 1 November 1910, the Royal Aero Club of Great Britain, the sole institution with authority for granting aviation licenses, had only granted twenty-two.<sup>10</sup>

However, Britain provided its share of obstacles to its emerging aviation industry. As late as 1909, a Mr. A. V. Roe had built his own machine, but was carefully watched by local authorities. Roe's activities were judged as somewhat irregular, and bordering on the criminal. A local bailiff was hired to prevent Roe's early efforts at flying (and actually arrested Roe while in the process of preparing to fly, but charges were summarily dropped when a Frenchman flew the Channel and Roe's activities were deemed legal by the local judiciary).<sup>11</sup> However, the government did not turn a complete blind eye to the potential of the aeroplane. A 28 January 1909 report by the Aerial Navigation Subcommittee suggested that while an attack on Britain from the air was not a present danger, experimentation with aeroplanes should proceed to determine what a future threat might entail. While supporting experimentation, funding was not forthcoming. This hands off approach in supporting aeroplane innovation would later haunt Britain as France and Germany embraced governmental support for their respective aviation industries.<sup>12</sup>

Undaunted, the adherents of the promise of aviation persevered. In 1909, Mr. Holt Thomas lobbied for government sponsorship of an aviation industry. He noted in April 1909 that German and French government expenditures on the aeroplane industry were £400,000 and £47,000 respectively, while British investment was only £5,000.<sup>13</sup>

Thomas was not alone in noting the implications of the aeroplane. In one of the earliest broadsides at the aviation naysayers, a Captain F. G. Stone noted, “artillery alone will scarcely be able to deny an enemy’s airships . . . this role can only be satisfactorily fulfilled by harbour airships, or, perhaps better still, by aeroplanes.”<sup>14</sup> Stone’s remarks were met with skepticism, particularly from those with equities in the balloon business. However one of the more stinging replies came from Brevet Major Sir A. Bannerman who believed, “We [the army] have the one great objection to the use of heavier-than-air machines for the purposes of serious attack: it involves entrusting an enterprise of the highest importance to an engine of which a momentary stoppage means failure.”<sup>15</sup>

Despite the growing public debate regarding a suitable use of airpower, others continued to find a credible application for the aeroplane. In September 1910, Holt Thomas attended military maneuvers in France as a private citizen, where for the first time France used aeroplanes for reconnaissance. Thomas noted that while many foreign officials attended this exercise, England had declined to send an observer.<sup>16</sup>

Thomas did have his motives for pushing the government towards a greater interest in the aeroplane. He had established the Aircraft Manufacturing Company, likely with the primary goal of securing government contracts. After the founding of his company, he remarked that the British Army, because of its small size in relation to those on the Continent, would need an aviation arm. He believed, and other airpower theorists would echo this opinion during and after the war, that aircraft would have other uses aside from aerial reconnaissance (with no elaboration). Further, he argued that this new aviation arm should be a separate arm from the army and navy. His views would reach

fruition with the creation of the RFC in 1912, and the establishment of its successor, the Royal Air Force (RAF) as a separate branch of service.<sup>17</sup>

Shortly after the French military integration of the aeroplane on the battlefield, an enterprising Royal Artillery Officer, Captain Bertram Dickson, offered the use of an aeroplane to a series of British Cavalry maneuvers in the fall of 1910. His offer was initially dismissed by the cavalry, but eventually allowed. Unfortunately for Dickson, bad weather interfered and he was not able to conduct his reconnaissance during the maneuver--somewhat supporting the cavalry's dismissive attitude of the military application for the aeroplane.<sup>18</sup> Dickson's setback however was soon followed with a success. Mr. Robert Lorraine, in a Bristol machine, succeeded in sending a wireless message from a quarter of a mile to a receiving station during a military maneuver.<sup>19</sup>

By 1910, the War Office had commissioned the Bristol Company for aeroplane development. However, the resources allocated were meager, and for good reason. The Committee for Imperial Defense had decreed that experiments with aeroplanes should be discontinued, but advantage should be taken of private industry in aviation.<sup>20</sup> Yet the air proponents would not be discouraged. Events within the military would pave the way for the evolution of an air component.

28 February 1911 marked the first move towards the development of a military branch of aviation. An Army Order established an Air Battalion of Royal Engineers. The order stated,

With a view to meeting Army requirements consequent on recent developments in aerial science it has been decided to organize an Air Battalion, to which will be entrusted the duty of creating a body of expert airmen. . . . The training and instruction of men in handling kites, balloons and aeroplanes, and other forms of aircraft, will also devolve upon this battalion. . . . A selected candidate will, on

joining the Air Battalion, go through a six months' probationary course. . . . An officer who satisfactorily completes the probationary period will be appointed to the Air Battalion for a period of four years.<sup>21</sup>

With the arrival of the Air Battalion, British aviation had taken the next step towards a separate aviation arm, and the Air Battalion staff lost no time determining the progress of their continental peers regarding aeroplanes. One of the more vocal advocates within the Air Battalion was Captain C. T. Burke. Burke believed in getting the aeroplanes' case heard wherever possible. Burke was a frequent lecturer and wrote prolifically about the latest developments in aviation. Shortly after the Air Battalion's formation, Burke, in a lecture, noted the rapid pace of growth of aviation technology and doctrine advancement in the German and French armed forces. Burke attempted to bolster the case for the use of aeroplanes in conjunction with ground maneuvers by noting recent British advances in aviation--highlighting that aeroplanes could now operate in winds up to 25 miles-per-hour; could carry a passenger up to a distance of 200 miles without stopping; reach altitudes of 2,000 feet; and confidently noting that aeroplanes could be operated "346 days a year."<sup>22</sup> Burke did concede certain roles for aeroplanes as inappropriate based on technological limitations, but discussed the future of air transport, the possibility of air-to-air combat, and believed that 'command of the air' would be equally as important as 'command of the sea' in the not too distant future.<sup>23</sup>

By October 1911, Burke noted that France had already used aeroplanes regularly in exercises and had between 200-220 machines on hand. But perhaps more importantly, these machines were integrated regularly into exercises with artillery, cavalry, and infantry. And perhaps more ominous to the Air Battalion, the Germans were keeping pace with the French.<sup>24</sup> The Battalion observed that in the French military maneuvers of

1911, the French had developed communications with observation balloons using wireless transmissions, and had also experimented with wireless from aeroplanes. The balloons and aeroplanes used maps with grids, which were also supplied to artillery and infantry forces for common frames of reference. Also, Burke noted the French were secretly experimenting with aerial photography for reconnaissance purposes.<sup>25</sup> The French maneuvers gave Burke further evidence to make his case about the importance of aeroplanes on the battlefield. Burke believed that at the onset of the next war, command of the air would be sought and “It is probable that the first day will see them [aeroplanes] in collision.”<sup>26</sup> Further, Burke equated command of the air with complete information awareness for commanders, if aeroplanes are used to the greatest effect.

In August 1911, British army maneuvers were to include the Air Battalion. However, the exercise was never fully executed because of army logistical constraints, yet for the Battalion, the army cancellation was a moot point. The Air Battalion had great difficulty deploying to support the exercise, and during the deployment the remaining serviceable aeroplanes sustained significant damage. By the end of the operation only two functional machines remained in the inventory of the Battalion.<sup>27</sup> Following the maneuvers, the Under Secretary of War announced to the Army Council that 80-100 pilots would be required to properly outfit the Air Battalion to more fully cooperate with the ground forces.<sup>28</sup>

The British General Staff became more interested in the Air Battalion with the discussion by senior government officials of expanding the Air Battalion to incorporate up to 100 pilots. Captain F. H. Sykes, an experienced aviator on the British General Staff, and representatives from the Air Battalion were tasked to pay a first-hand visit to French

air units. This visit was followed in 1912 by the Technical Sub-Committee of Imperial Defence (TSID), which visited France, Austria and Germany to investigate the state and nature of their use of aeroplanes. The committee subsequently noted, “no year passes in which orders equal to our total equipment are not placed by Germany, France and Italy.”<sup>29</sup> The Committee also opined, “Unless we had obtained command of the air, any idea that our torpedo craft could seek shelter . . . and remain there undetected must be abandoned.”<sup>30</sup>

Predictably, the British Admiralty reacted to this latest report, particularly taking note of German developments in the airship arena, and responded by reinstating their own airship program.<sup>31</sup> However, the Admiralty did not solely focus on airships. By November 1911, a Commander Swann had privately purchased his own aeroplane to demonstrate the “seaworthiness” of such a machine. After a number of modifications, Swain succeeded in making the first flight from a body of water, which subsequently led to the first flight from the deck of a ship, the *H.M.S. Africa* in December 1911.<sup>32</sup>

Despite progress in developing aviation technology in the navy and army, neither effort was well coordinated. A great deal of discussion within the government was concerned with how best to maximize the results for the entire military establishment (and the quickest way to do so). Indecision in the upper echelons of the military reflected itself in uncertainty within the Air Battalion in 1911, particularly over which technology to pursue; aeroplanes or airships, and in turn whether investment and training be geared towards one airframe at the expense of the other.

Less than three years before the outbreak of war on the continent of Europe, Great Britain’s air effort was struggling with two serviceable aeroplanes in the Air Battalion’s

inventory. The tenuous state of affairs of British aviation was ultimately brought to the attention of Prime Minister Asquith. In November 1911, the Prime Minister requested the TSID to consider the future of the air for military purposes. After a comprehensive review with input from both the army and navy, the TSID recommended the creation of “The Flying Corps,” which would consist of a Military Wing, a Naval Wing and a Central Flying School.<sup>33</sup>

Captain Bertram Dickson, an early advocate of aeroplanes testified to the TSID to support the creation of the new Flying Corps, and stated,

In case of a European war, between two countries, both sides would be equipped with large corps of aeroplanes, each trying to obtain information on the other . . . the efforts which each would exert in order to hinder or prevent the enemy from obtaining information . . . would lead to the inevitable result of a war in the air, for the supremacy of the air, by armed aeroplanes against each other. This fight for the supremacy of the air in future wars will be of the first greatest importance, and when it has been won, the land and sea forces of the loser will be at such a disadvantage that the war will certainly have to terminate at a much smaller loss in men and money to both sides.<sup>34</sup>

Asquith approved the recommendations and on 13 April 1912, the RFC was established. The Air Battalion, the RFC’s predecessor, was officially incorporated into the RFC on 13 May.<sup>35</sup> The guiding personalities behind the creation of the RFC were Brigadier General David Henderson, who would be its first commander; Captain F. H. Sykes, who would be one of its later commanders, and Major D. S. MacInnes. These officers were handed a significant task: create an organizational structure, a training regimen and establish a recruiting program.<sup>36</sup>

The White Paper formally creating the RFC established the roles of the Military Wing as “reconnaissance, prevention of reconnaissance by the enemy, communication between headquarters, observation of artillery fire, and infliction of damage on the

enemy.<sup>37</sup> However, subsequent field service regulations would focus only on reconnaissance, despite the other missions taking on larger roles, as the war would progress. The Naval Wing was given wider latitude with roles and missions. The Naval Wing would have the same roles as the Military Wing, but would also “be armed with bombs or machine guns to attack enemy submarines and ships.”<sup>38</sup>

The RFC organization that Henderson, Sykes and MacInnes proposed on paper would be based around the squadron. Each squadron would contain three flights, each of which would have four machines. The RFC’s initial organization would include seven aeroplane squadrons, with each squadron equipped with twelve machines (and one extra for the commanding officer of each squadron). Two pilots would be assigned to a squadron for every plane, and to account for “wastage” an equal number of pilots would be trained and held in reserve status. Based on the proposed nature of the British Expeditionary Forces, the RFC calculated 364 trained pilots would be required at the onset of any future conflict.<sup>39</sup> The idea of who should be trained to be a pilot was still unsettled. The navy, in particular First Lord of the Admiralty Churchill, thought a mix of officers, non commissioned officers and petty officers should be trained to fly. Indeed, a few non commissioned officers were trained for piloting, based on the assumption that the officer might be “busy” with other tasks and might need someone else to fly for him. Nevertheless, the idea of recruiting pilots from the lower ranks became more of a social question; “men chosen from the NCO-ranks of the army or the lower-deck of the navy do not make good pilots.”<sup>40</sup> The army, based initially on time constraints for training a significant number of pilots in a short time, decided it would stick with officers.

Major Sykes had been given command of the Military Wing under Brigadier General Henderson's RFC Headquarters. Sykes was an experienced pilot (relatively speaking in comparison to the brand new recruits in training, and the cadre of officers on hand at the inception of the RFC).<sup>41</sup> However, Sykes was faced with a training dilemma. Only four serviceable machines were available for training (much to the dismay of the new recruits). The Central Flying School, which would be responsible for initial training for both the Military Wing and the Naval Wing, had more trainees than aircraft available. The school plan was to have three courses per year with follow-on training at the operational squadrons. Nineteen students were assigned to the first course, and with only four planes for use, more classroom instruction was the norm than actual flying. The initial training syllabus included map reading, signaling, mechanics and engineering, and the "art of reconnaissance." However, four machines would not suffice; the initial pilot-training class soon damaged or destroyed all four in the course of three months.<sup>42</sup>

Upon the inception of the RFC, No. 2 and No. 3 Squadrons (Sdns) became the initial testing grounds for coordination with the other services. Specifically, No. 3 Sdn devoted itself to develop cooperation with the ground forces, particularly artillery. Early cooperation was slow and with mixed results. Early communication from aeroplane to artillery involved the use of written messages dropped from aircraft, the use of flags, and later the use of lights. Needless to say, prior to installing wireless radios in aeroplanes, communications between artillery and aeroplanes was slow.<sup>43</sup>

*Esprit de corps* also surfaced as an issue for Sykes, based on the extraordinary number of casualties incurred during training. Additionally Sykes began work to establish a service identity. Sykes, a firm disciplinarian would order units to continue flying even

after accidents had caused deaths. Sykes also developed a service motto, *Per adua ad astra* (with effort to the stars).<sup>44</sup>

By September 1912, military maneuvers incorporating the RFC had begun to pay dividends. Generals Haig and Grierson led the maneuvers during this month, with one RFC squadron devoted to either side. According to a member of No. 2 Sdn who participated in the exercise, “no considerable body of troops could move without being seen from the air.”<sup>45</sup> Aerial observations had indeed been passed to both general staff headquarters, and some actions were decided based on the aerial reconnaissance. Sykes, who worked with General Haig’s staff, was concerned about Haig’s attitude towards the RFC, quoting Haig, “Tell Sykes he is wasting his time; flying can never be of any use to the army.”<sup>46</sup> Grierson however saw the utility of the aeroplane, stating, “It is impossible to carry on warfare unless we have mastery of the air.”<sup>47</sup> Despite early successes, few ground commanders would be afforded the opportunity to train with airmen prior to World War I, and the veracity of information from the air would continue to be questioned. These problems would complicate future coordination between ground commanders and airmen for the effective employment of airpower.

Army maneuvers of 1913 witnessed the expanded use of aeroplanes in coordination with ground forces. No. 3 Sdn had deployed twelve machines to support a series of maneuvers, gleaned a new host of lessons learned. Primarily, aerial observations could now be made at heights of up to 6,000 feet. Unfortunately, operating at these new altitudes brought about physiological problems, as well as engine difficulties. In addition to these new challenges, Squadron Commander Major Burke still had difficulty with ground commanders accepting the information from aerial

observations.<sup>48</sup> Yet still the advocates of the aeroplane made their case heard. Wireless transmissions from aeroplanes became more practical (up to 70-100 miles in transmission distance). Also theoretical discussions continued to advance in professional journals, with one author arguing the case that once command of the air had been gained by destroying the enemy's aircraft, ground and naval forces could move unencumbered. Additionally, the case for the RFC to become independent was made yet again: "perfect freedom of action is necessary and this they [RFC] can never attain as long as they are looked upon as mere adjuncts to the other branches of the country's war forces."<sup>49</sup> Yet others noted the continued insufficient state of the RFC in relationship to aviation forces in Europe. Colonel Capper, Commandant of the School of Military Engineering stated, "Looking at our present numbers of aeroplanes and airships and the number of really trained officers and men we possess, I can only say that we have in England hardly sufficient for very minor campaigns against a savage enemy or against some petty European power."<sup>50</sup> This thought was echoed by the issuance of an "air manifesto" by a group of concerned citizens on behalf of the Aerial League of the British Empire,

The estimates for the Empire's defence will shortly be laid before Parliament; and an opportunity is thus provided to make up some of the lost ground. Nothing less than the immediate allocation of £1,000,000 will suffice to give the aerial arm the stimulus that is so urgently needed . . . which our neighbours consider essential, in spite of the heavy financial strain entailed.<sup>51</sup>

Following the maneuvers of 1913, the RFC increased the pace of experimentation. No. 3 Sqn conducted trials to determine the suitability of their machines for air-to-air combat, and the utility of various machine guns in the air.<sup>52</sup> This testing would continue until after the outbreak of war. In the interim, most British airmen were armed with rifles and pistols.<sup>53</sup> Also the first night flight had been conducted earlier in

1913. By early 1914, No. 3 Sdn had begun demonstrating aerial photography (using privately owned cameras--none had yet been funded by the RFC).

While aviation in Britain continued to advance, the aeroplane was slow to be put to practical use in the British Empire. Most members of the Empire gleaned what they could from Britain, to include instructors and machines. The technology gap between Britain and the remainder of the Empire would put the British Empire at a disadvantage as military operations commenced outside of the European theater in 1914.

What of aviation developments in India? While India had not been at the hub of the technological race to develop more advanced aeroplanes, officers in the Indian Army kept abreast of developments in Britain. As early as 1910, a case was being developed to outfit the Indian military with aeroplanes; "From a military point of view, such high speed machines would be valuable for offensive and defensive purposes, particularly against other flying machines, but to fulfill their main role with a field army in reconnaissance."<sup>54</sup>

Former members of the Air Battalion had transferred to India, and brought their airpower advocacy along with them. One ex-Air Battalion member, a Lieutenant Blacker enthusiastically wrote, "In fact an aeroplane is practically invulnerable to anything except another faster aeroplane."<sup>55</sup> Blacker also expounded on a thought gaining more weight in Europe, specifically that the "aeroplane has made an end to the fog of war."<sup>56</sup> Blacker publicly proposed that India would require up to one hundred aeroplanes per division, and could easily recruit a cadre of pilots from the younger officers in the army. To add a further call to action, Blacker noted that aside from European investment in aeroplanes, the Chinese and Turks had made significant progress in establishing an air component.<sup>57</sup>

Other aeroplanes advocates likewise urged the Indian government to get into the aeroplane business, noting that England was already lagging her continental counterparts. Captain S. D. Massy, another aeroplane advocate in India commented, "I have I trust given sufficient instances to carry conviction in the necessity of India having its Flying Corps and having it without delay . . . our requirements in aircraft will be large."<sup>58</sup>

Notwithstanding the growing chorus for increased expenditures on aeroplanes, India initially looked internally to determine what air resources would be immediately available in case of emergency. But it would not be until mid-1913 that the Indian military would embark upon their own aviation element. In July 1913 the *Journal of the Royal United Services Institute (RUSI)* reported that India would send four officers to the Central Flying School in England for training, and upon their return to India, establish an Indian Air Service.<sup>59</sup> It is unclear how many Indian Air Service personnel were on hand in 1914, but all who had been trained, either initially in England, or subsequently in India, were transferred back to England prior to August 1914.<sup>60</sup>

As noted earlier, the Military Wing and Naval Wing of the RFC had from the start been operating as essentially separate services. This dual track of funding, training and development became evident as Britain inched closer to war.

Prior to the announcement of the creation of the RFC, naval advocates were publicly voicing the need for the navy to become involved in aviation. On February 1912, Captain Sueter, Director of the Air Department of the Admiralty (in testimony to the TSID) stated the navy would require both airships and aeroplanes. The navy, he said, saw airships as a platform for an extension in range for wireless transmissions, and seaplanes could land on either water or land. Regarding whether the command of the air would be

important for the navy, Sueter claimed, "I think it will come to that. I do not say that we wish to do so, but I think we will be forced to do so."<sup>61</sup>

The Navy Wing had its own ideas about adhering to the RFC's training syllabus. All navy pilots would go through the Central Training School, but not in accordance with the Military Wing's regimen. As a result, the Air Committee was established in July 1912 to coordinate the Navy Wing's development of aviation. This action implicitly recognized the distinct nature of the Navy Wing's role vice that of the Military Wing. However well intended, this organization had no regulatory authority, and could only advise on maintaining some standards between the two organizations and thus "faded away like the ghost in Hamlet."<sup>62</sup> The dual nature of the RFC began a brief inter-service rivalry between the two wings, primarily for the limited resources available to aviation during the pre-war era.

The Navy Wing also experimented with new technologies, specifically those that would assist with its mission of coastal defense. Navy aviators had been in the lead on developing technologies to counter the perceived German airship threat. The Naval Wing developed the Hale Grenade, which when fired from a rifle, would explode on contact with the skin of a zeppelin. The Navy Wing also experimented with aerial bombardment, which caught the notice of the Military Wing in early 1914.<sup>63</sup> The greatest strides made by the Navy Wing came with the incorporation of wireless into the aeroplane. Previously, effective wireless sets were restricted to airships because of the size and weight of the apparatus. However, developments were made in reducing size and weight, and also in the ability of the pilot to hear transmissions over the enormous din of the aeroplane engine. By the onset of the war, the great majority of seaplanes had been outfitted with

wireless. Additionally, the Navy Wing had two aeroplanes outfitted with machine guns, and all others with rifles.

The distinct nature of the Navy Wing was formalized on July 1914, with the renaming of the Navy Wing to the Royal Naval Air Service (RNAS). This officially broke the RFC in two, although both arms had been operating independently since 1912.<sup>64</sup> The RNAS was tasked with the protection of the country against hostile aircraft as its primary mission, with scouting and patrolling as a secondary mission.<sup>65</sup>

As the RFC entered 1914 the possibility of war was becoming more of a reality. Sykes, recently promoted to Lieutenant Colonel, in a speech to the Aeronautical Society noted rapid progress in aeroplane capabilities in reconnaissance, aerial bombardment and wireless transmission. Sykes also introduced experimental flights in each squadron and an experimental headquarters section to refine new technologies and tactics. Additionally, Sykes established sections within each squadron to handle meteorology, maintenance, supply and other duties; ensuring the squadrons were self-sufficient in routine tasks.<sup>66</sup> “Mobility and readiness for instant action at anytime must be the essence of being a flying corps. Command of the air would undoubtedly be sought and it would as undoubtedly be difficult to obtain.”<sup>67</sup>

In preparation for a war that to some seemed inevitable, Sykes coordinated the “Concentration Camp” where all active RFC squadrons were brought in June of 1914 for a mass mobilization exercise. The Camp coordinated a series of lectures, tactical exercises, reconnaissance trials, and aerial photography testing. Moreover, this would be the last opportunity to fully coordinate a baseline training program prior to the commencement of hostilities in August.<sup>68</sup>

The RFC would enter the war with a well-established training manual governing facets of warfighting, training, maintenance and administrative duties. This manual, the “airpower bible” for the RFC ensured a standardized template for all RFC subordinate units. It created, where none existed before, strategic and tactical doctrine. Anticipating problems with the use of the RFC by ground commanders, Sykes ensured that the RFC Headquarters in the field would be co-located with General Headquarters (GHQ), and all requests for reconnaissance would be filtered and approved by RFC Headquarters.<sup>69</sup>

In addition to RFC preparing and codifying its doctrine, the House of Commons began gearing British industry to begin large-scale manufacture of aeroplanes by early 1914. The government was cognizant of the rapid obsolescence of aeroplanes as technology advanced, and also noted the requirement for replacement aeroplanes due to wastage (accidents, combat losses, and others). The House of Commons decided to reinvigorate the initial plan for seven RFC squadrons, and embarked upon a plan to completely outfit eight squadrons by the end of 1914 (a total of 250 aeroplanes) increasing the squadron size from eighteen to twenty-five machines.<sup>70</sup> Unfortunately, Britain would not have time to see their plan realized prior to war. From 3-11 August, the RFC, under Brigadier General David Henderson deployed to France. With him went the RFC headquarters, and Sdn Nos. 2, 3, 4 and 5.<sup>71</sup> The inadequate state of the RFC at the beginning of the war would have significant repercussions throughout the Empire--specifically in Mesopotamia. The Indian Government would begin its preparations for deployment to Mesopotamia and British East Africa with no cadre of trained pilots or serviceable aeroplanes.

---

<sup>1</sup>Raleigh, 139. This incident, while unusual, was not isolated. A Captain Patrick Hamilton also experienced a similar reaction while in Argentina. He was stoned by an unruly mob when he could not get his machine to operate during particularly violent weather. (Raleigh, 216.)

<sup>2</sup>Ibid., 150.

<sup>3</sup>Ibid., 153.

<sup>4</sup>Britain had been supporting indigenous efforts at developing an aeroplane, which proved unsuccessful. Malcolm Cooper, *The Birth of Independent Airpower* (London: Allen and Unwin, 1986), 3.

<sup>5</sup>Raleigh, 71.

<sup>6</sup>French development of machines similar to the Wright Brothers sparked lawsuits by the Wrights, which some say detracted from their ability to refine their machine. Interestingly, a Paris court upheld the Wright's patents on 12 March 1913. *The Times*, 14 March 1913, 10.

<sup>7</sup>Raleigh, 158. Of note, aviation pioneer F. W. Lanchester was on the new Advisory Committee.

<sup>8</sup>Raleigh 75.

<sup>9</sup>Director of Naval Intelligence, "The Possibility of Making Use of Balloons and Motor Airships in the Navy," *Journal of the Royal United Services Institute (RUSI)* 52, no. 369 (November 1908): 1502.

<sup>10</sup>Raleigh, 121; Cooper, 3. Of note, two of the twenty-two were T. O. M. Sopwith and Geoffrey de Havilland, both pioneers of the British aviation industry. Cooper also describes Britain's hope that private enterprise would spark innovation in aviation.

<sup>11</sup>Ibid., 117.

<sup>12</sup>Cooper, 2.

<sup>13</sup>Raleigh, 136.

<sup>14</sup>Colonel F. G. Stone, "Defense of Harbours against Naval Airships," *RUSI* 53, no. 375 (May 1909): 559. Ironically, the commandant of the British Balloon Factory, Colonel J.E. Capper commented in response that "An attack at present by aeroplanes on dirigible balloons appears to be out of the question." But Capper conceded, "I don't know how quickly the aeroplane is going to develop." 568-569.

<sup>15</sup>Brevet Major Sir A. Bannerman, "The Difficulty of Aerial Attack," *RUSI* 53, no. 375 (May 1909): 638. Flash forward to the present, and one will hear this remark jokingly made in the officer's club of many fighter bases by twin-engine fighter pilots at the expense of single-engine F-16 pilots. Ironically, Bannerman was a commander of the Air Battalion's 1st Company of balloons, which explains the bias against aeroplanes. Ash, 26.

<sup>16</sup>Raleigh, 136. Thomas may or may not have been correct about English military observers. A Lieutenant Colonel W. G. Simpson noted in a lecture given by Captain C. T. Burke of the Air Battalion that indeed he had attended the maneuvers, and further noted that the aeroplanes were not as successful as advertised due to bad weather and poor reconnaissance reports. Captain C. T. Burke, "The Aeroplane as an aid to the Solution of Existing Strategical Problems," *RUSI* 55, no. 406 (December 1911): 1636.

<sup>17</sup>Raleigh, 136.

<sup>18</sup>Raleigh, 138-140. One of the cavalry's initial reasons for denying Dickson the opportunity was the idea that the aeroplane would scare the horses. Of course artillery barrages and gunfire would not have the same effect on the horses!

<sup>19</sup>*Ibid.*, 140. A remarkable achievement for the time based on the weight and size of the wireless.

<sup>20</sup>*Ibid.*, 141.

<sup>21</sup>*Ibid.*, 142.

<sup>22</sup>Captain C. T. Burke, "Aeroplanes of Today and their use in War," *RUSI* 55, no. 399 (May 1911): 623. In the essay, Burke also noted the successful French maneuvers of 1910 and use of aeroplanes.

<sup>23</sup>*Ibid.*, 624-629. Not to sound quite the heretic, Burke conceded to the cavalry that their mission would not be replaced by airpower, but aeroplanes could extend the cavalry's operational radius.

<sup>24</sup>Raleigh, 178.

<sup>25</sup>*Ibid.*

<sup>26</sup>Captain C. T. Burke, "The Aeroplane as an aid to the Solution of Existing Strategical Problems," *RUSI* 55, no. 406 (December 1911): 1626-1636. Burke also tones down the ability of aeroplanes to fly 346 days/year, and notes they could fly 80 percent of the year--still wildly optimistic for England's weather.

<sup>27</sup>Raleigh 193-195. After this poor performance, the British Government bought an unidentified amount of aeroplanes to replace losses sustained during the exercise.

Symptomatic of the poor state of funding for aeroplanes, a Mr. H. Barber donated 4 Valkyrie military aeroplanes to the Battalion to further encourage aviation. "Aeronautical Notes," *RUSI* 55, no. 401 (July 1911): 956.

<sup>28</sup>"Aeronautical Notes," *RUSI* 55, no. 402 (August 1911): 1089.

<sup>29</sup>Raleigh, 180; Eric Ash, *Sir Frederick Sykes and the Air Revolution 1912-1918* (London: Frank Cass, 1999), 24. Sykes' after action report, entitled "Notes on Aviation in France," reportedly cause a stir in the British government, laying bare the state of British aviation vis-à-vis France and the rest of Europe.

<sup>30</sup>Raleigh, 181.

<sup>31</sup>First Lord of the Admiralty, Winston Churchill, approved the new program for reinstating research in lighter-than-air airships.

<sup>32</sup>Raleigh, 184-186.

<sup>33</sup>Raleigh, 198; Ash, 26. The RFC would also include a Reserve and a Royal Aircraft Factory.

<sup>34</sup>Raleigh, 175-176. These thoughts would become prominent in the thinking of post-war airpower theorists such as Trenchard, Slessor, Mitchell and others, although not necessarily attributable to Dickson, but likely from their own experiences in the war.

<sup>35</sup>Cooper, 6-7; Raleigh, 199; Ash, 25. The added emphasis on establishing an air arm for the military could come none too soon. The TSID in January 1912 had noted at that time that the army had eleven pilots and the navy only eight. Later in March, the House of Commons was informed of the need for 133 officers for the Military Wing, and 30-40 officers for the Naval Wing.

<sup>36</sup>Raleigh, 200-202 Henderson had written *The Art of Reconnaissance* in 1907, and was probably the most influential senior officer for aviation in the British military at the time. Major MacInnes was a native Canadian, and was the Canadians first major contribution to the Royal Flying Corps. S. F. Wise, *Canadian Airmen and the First World War: The Official History of the Royal Canadian Air Force, Volume I* (Toronto: University of Toronto Press, 1980), 6-7.

<sup>37</sup>Ash, 26; Wise, 7.

<sup>38</sup>Wise, 7.

<sup>39</sup>Raleigh, 202-204. This differed slightly from France, whose basic unit was called the *Escadrille*, which had six machines per flight. At the outbreak of war in 1914, only four of the seven squadrons would be ready for immediate service in France. See Raleigh, 214. The first operational squadrons for the RFC were No.2 and No. 3 Sdns

under Majors Burke and Brooke-Popham respectively. Once training commenced No.4 Sdn, established September 1912, under Major G.H. Raleigh; No. 5 Sdn, established August 1913 under Major J.F.A. Higgins; No. 6 Sdn established January 1914 under Captain J. H. W. Becke; and No. 7 Sdn in May 1914 under Major J. M. Salmond, Raleigh 238. (No.1 Sdn was an airship squadron that was delivered to the Navy Wing.) See Peter Lewis, *Squadron Histories, R.F.C., R.N.A.S., and R.A.F, 1912-1959* (London: Putnam, 1959) for more details on squadron origins.

<sup>40</sup>Raleigh, 205.

<sup>41</sup>In 1910, Sykes had already flown several types of machines, but was temporarily grounded after a near mid-air collision forced him to crash land. He finally received his official aviator's certificate in 1911, only the sixth British officer to do so. Ash, 22-23.

<sup>42</sup>Raleigh, 237. After the initial class of nineteen students, the average class size expanded to thirty students per class, most from the army, to a lesser extent the navy, and some marines.

<sup>43</sup>*Ibid.*, 240.

<sup>44</sup>Ash, 28. The King would approve the motto on 4 April 1913. *The Times*, 5 April 1913, 6e.

<sup>45</sup>Raleigh, 244. Ironically, RFC participation in the exercises were somewhat hindered by curious crowds of soldiers and civilians, who crowded around the hangars, delaying the movement from the shelters.

<sup>46</sup>Ash, 29. Quoting from Sykes's *From Many Angles: An Autobiography by Major-General the Right Hon. Sir Frederick Sykes* (London: Harrap, 1942.)

<sup>47</sup>*Ibid.*, 30.

<sup>48</sup>Raleigh, 241; Ash, 37- 39. Military maneuvers afforded the opportunity to use aeroplanes to Field Marshal Sir John French and Major General Charles Monro, future BEF commander and GOC at Gallipoli respectively. These maneuvers also saw the first attempt at preventing friendly fire incidents by introducing standardized paint schemes for aeroplanes.

<sup>49</sup>Colonel J. D. Fullerton, "Aeronautical Progress," *RUSI* 57, no. 420 (February 1913): 330-333.

<sup>50</sup>Cooper, 1.

<sup>51</sup>*The Times*, 14 March 1913, 10.

<sup>52</sup>Raleigh, 249-250. Not until September 1914 would the first British machines equipped with Lewis Guns would reach France.

<sup>53</sup>Trevor Henshaw, *The Sky Their Battlefield: Air Fighting and the Complete List of Allied Air Casualties from Enemy Action in the First War* (London: Grub Street, 1995), 19. Henshaw notes British pilots were also required to carry a portable stove and soup-making equipment. Not to be outdone, German pilots were initially required to carry their sabers--undoubtedly useful in air-to-air combat!

<sup>54</sup>Captain W. M. St. G. Kirke, "Notes on Aeronautics," *Journal of United Service Institute of India (JUSII)* 39, no. 178 (January 1910): 81.

<sup>55</sup>Lieutenant L. V. S. Blacker, "Aviation," *JUSII* 41, no. 188 (July 1912): 245.

<sup>56</sup>*Ibid.*, 249. Lieutenant Colonel Sykes would note later in 1914 that "the fog of war is already turning to a fine mist." "Aeronautical Notes," *RUSI* 58, no. 432 (February 1914): 276.

<sup>57</sup>Blacker, *JUSII*, 245-249.

<sup>58</sup>Captain S. D. Massy, "Military Aeronautics," *JUSII* 41, no. 189 (October 1912): 452-453.

<sup>59</sup>"Aeronautical Notes," *RUSI* (September 1911): 1240; "Aeronautical Notes," *RUSI* 57, no. 425 (July 1913): 1001.

<sup>60</sup>Moberly, 68. Moberly says "At the outbreak of war all the pilots and students at the aviation school were sent home and given up to the War Office." August 1913 also saw the inception of the Australian Central Flying School, begun with three aeroplanes sent from the U.K., and a further two to be sent later. The first class in Australia began 17 August for four officers, with two British instructors. Cutlack, 1. This will be important when Expeditionary Force "D" begins searching for qualified pilots. "Aeronautical Notes," *RUSI* 57, no. 429 (November 1913): 1545.

<sup>61</sup>Cooper 7-8; Raleigh, 175. Sueter may have based his arguments about the utility of seaplanes based on Commander Swain's previous experiments with seaplanes.

<sup>62</sup>Cooper, 7.

<sup>63</sup>Wise, 9. Earlier efforts at bombardment were not received well in the Admiralty, or on the Imperial General Staff, based on the perceived poor results of bombardment during the Balkan Wars.

<sup>64</sup>Raleigh, 272.

<sup>65</sup>*Ibid.*, 274.

<sup>66</sup>Ash, 39.

<sup>67</sup>“Aeronautical Notes,” *RUSI* 58, no. 432 (February 1914): 277.

<sup>68</sup>Raleigh, 259; Ash, 43-44. Not only did Skyes mastermind a successful training exercise immediately prior to the war, he also chalked up a public relations coup through extensive media coverage of the exercise and by inviting senior officials to the camp to see aerial demonstrations.

<sup>69</sup>Ash, 40-42. By no means was the training manual all-inclusive, and it has been criticized for not emphasizing enough subjects such as a standardized training regimen, which was one of the significant contributors to the high incidences of accidents in peacetime.

<sup>70</sup>“Aeronautical Notes,” *RUSI* 58, no. 433 (March 1914): 416.

<sup>71</sup>Ash, 5; Cooper, 9; Raleigh, 284-292. An interesting narrative of the deployment and subsequent operations by the RFC in France can be found in Maurice Baring’s *Flying Corps Headquarters, 1914-1918* (London: William Heinemann, 1920). Cooper states the deployment to France had 50 aeroplanes, with 75 left behind in England, half of which were fit for flying. In comparison, France immediately fielded 24 *escadrilles* with 120 machines, and Germany fielded 33 *Feldfliegen-Abteilungen* with 200 machines.

## CHAPTER 4

### BASRA TO KUT AL-AMARA: NOVEMBER 1914-MAY 1916

The IEFD was poised to make a move against the Ottomans by 23 October 1914, with one brigade positioned in Bahrain. When war was declared against Turkey on 31 October, Brigadier General Delamain, GOC 17th Brigade, was ordered to move his unit to take the island of Fao on the southern tip of Mesopotamia, which he completed without much effort by 6 November. A series of successful skirmishes found IEFD in possession of Basra by 22 November and with a foothold in Qurna by 9 December.<sup>1</sup>

The Government of India (GOI) reinforced success and reorganized the IEFD as an Army Corps under General Sir John E. Nixon, who arrived with a Corps staff on 9 April 1915. On his staff came the first RFC officer to arrive in theater, Captain P. W. L. Broke-Smith. Broke-Smith's duty was to create the basis for the long-awaited introduction of aeroplanes into theater, and to establish an airpark at Basra. Broke-Smith's presence was necessary based on a call from the field for the requirement for aeroplanes. What was the requirement for aeroplanes at this early phase of the Mesopotamian Campaign, and did their presence affect this phase of the campaign? The RFC faced significant hurdles at the beginning of the Campaign to maintain an effective aviation arm. Nevertheless, aeroplanes would make a significant contribution to this phase of the Campaign, despite a critical lack of trained pilots and operational machines.

As early as 9 January 1915, Major General Sir Arthur Barrett, GOC 6th Division, had requested aeroplanes. His request was based on his cavalry's inability to conduct reconnaissance because of the rising waters of the Tigris and Euphrates. Additionally, the increasing threat from the growing number of hostile Arabs and the possibility of Turkish

reinforcements all added into Barrett's decision to request aeroplanes from India.<sup>2</sup>

Unfortunately for IEFD, Barrett's request could not be satisfied: the GOI had sent all eligible pilots to England and Egypt to support efforts deemed more important by London.

The GOI determined it would ultimately need to satisfy the requirement for aeroplanes to support its expeditionary forces in Mesopotamia and Africa. On 8 February 1915, the GOI formally requested of Australia, any eligible aviators for Mesopotamia.

Could you provide any trained aviators for service in Tigris Valley? All our trained officers are in Egypt and England. If officers available, can you also send machines complete with motor transport, mechanism, personnel, spares, etc.? We should prefer biplanes. If available, we should like particulars of machines.<sup>3</sup>

The Australian government responded, "We will send four flying officers, about twenty mechanics and drivers. . . . This provides a half-flight complete. . . ."<sup>4</sup> This initial cadre of four officers would constitute the Mesopotamian Half-Flight.

Prior to the arrival of aeroplanes into theater, the specter of enemy aeroplanes was already present amongst IEFD troops. Captain Henry Birch Reynardson of the 1st Oxfordshire and Buckinghamshire Light Infantry, leading a company along the Tigris north of Basra, noted this report from an Arab prisoner:

An Arab was captured--intentionally, we suspected later--who gave quite blood-curdling accounts of what was in store for us: guns as long as palm-trees, huge armies of Turks and a thousand German officers at Baghdad, together with many aeroplanes. Noticing, no doubt, the hit this scored, he rather unfortunately enlarged upon the aeroplanes, and described how he had seen them flying, and how 'they flapped their wings like immense birds.' However, even so, his news was believed in some quarters, and no working party was allowed on the perimeter without a percentage of rifles told off to look for the immense birds, and instructed that it was necessary to aim ten lengths in front in order to bring them down; unfortunately, they never had a chance of proving the efficacy of this recipe.<sup>5</sup>

The Half-Flight arrived in Basra on 26 May 1915 to be met by Captains Broke-Smith and H. L. Reilly.<sup>6</sup> Upon arrival at Basra, Australian Captain T. W. White remarked on the state of affairs for their new Half-Flight:

These two officers [Broke-Smith and Reilly] with about four British and five Indian mechanics, formed the Indian Flying Corps. . . . They possessed two motor-lorries and a few spare aeroplane parts . . . a road of date palm logs had been made from the Shatt-al-Arab . . . across a swamp to an Arab cemetery, where tents had been pitched and a small aerodrome was in the making.<sup>7</sup>

Broke-Smith had by this time managed to secure two Maurice Farman (MF) Shorthorn biplanes, and one MF Longhorn, which had been worn from use in Egypt, and could usually be found permanently located in the maintenance hangar at Basra.

The new Half-Flight had little time to organize after arrival. General Nixon's forces were moving north, led by Major General Townshend's 6th Division, and these few machines would play an important role in reconnaissance. This was in part due to the extensive flooding throughout the plain surrounding the Tigris River, which forced Townshend's infantry and artillery to maneuver and operate from rafts. The first appearance of the two MF Shorthorns over advancing 6th Division forces on 31 May reportedly was met with enthusiasm by Townshend's men. The reconnaissance gleaned from this flight was delivered personally by the pilots to Townshend's staff, and established the Turkish positions in the vicinity of Qurna. The following day, aerial reconnaissance noted Turkish positions were abandoned and retreating forces were moving north. Of additional note, the reconnaissance from this mission was delivered via a message in a can, dropped into the Tigris, to be picked up by Townshend's command ship. Amazingly, in spite of floating mines and debris in the river, the message was received and analyzed. Townshend, armed with this new information, moved quickly and

with a small-armed force, advanced fifty miles ahead of his division and accepted the surrender of Turkish forces at Amara.<sup>8</sup> Thus the first major advance, from 31 May to 4 June was a success. And for the first time in theater, aeroplanes were put to effective use.

Because of the flooding during and prior to the Qurna and Amara operations, the RFC considered the utility of seaplanes. Broke-Smith reported “Land aeroplanes until August (the end of the flooding season) can be used only to a limited extent . . . ” and believed that in certain areas “aeroplanes with floats only can be employed, unless the risk of losing a machine by every forced landing, even though not in the presence of the enemy.”<sup>9</sup>

On 9 June, the air element was moved to Amara, and by 14 June conducted the first aerial reconnaissance of the city of Kut al-Amara (123 miles northwest of Amara). Major H. L. Reilly made the flight from an advanced refueling post at Ali Gharbi (approximately sixty miles to the north of Amara).<sup>10</sup> Reilly’s initial sketches of the area around Kut laid the groundwork for subsequent reconnaissance flights and provided a greater level of detail regarding Turkish troop and trench dispositions.

After success at Amara, General Nixon decided to move on Turkish positions at Nasiriyah, an outpost along the Euphrates River. This decision was made despite mounting heat-related casualties. Indeed, the heat would also plague the fragile aeroplanes. The aircraft park logbook noted, “The average temperature during June-September 1915 was 105 degrees in the shade. This heat, together with the fierce and dust-laden northerly *Shamal* [a strong NNW wind,] caused the air-cooled aviation engines to seize and malfunction before and during flight.”<sup>11</sup>

The operation against Nasiriyah did not start well for the RFC. A 19 June aerial reconnaissance in an MF resulted in a seized engine upon return to base and subsequently put this machine into repair. The next day, an additional MF also suffered the same fate after its mission from Nasiriyah. Fortunately for the RFC and for the IEFD, two Gnome Caudron machines arrived in Basra on 4 July, and were immediately pressed into service for the impending advance on Nasiriyah.<sup>12</sup> The two reconnaissance reports from the Caudrons completed the mapping of Turkish positions, and allowed Major General Gorringe, GOC XII Division, to prepare for the attack.

On 22 and 23 July, artillery fire was directed for the first time in the Campaign by one of the Caudrons in preparation for the attack. On 24 July Gorringe launched the attack and by 25 July had captured Nasiriyah. RFC contributions in the operation prompted General Nixon, GOC IEFD, to remark in a dispatch, "I have to place on record the excellence of the work performed by the officers and men of the RFC, whose valuable reconnaissance materially assisted in clearing up the situation before the battle of the 24th July."<sup>13</sup>

Since the operation in Mesopotamia began, hostile Arabs had always been a concern to the IEFD. Ground forces were generally prepared to fend off the frequent harassing attacks of the local Arab tribes. However, for the aviators in Mesopotamia, ensuring engine reliability was critical, not only to the success of the mission, but for the safety of the pilot. Every effort would be made by the men of the RFC to get their machines over friendly lines in the event of an in-flight engine problem, but was not always possible. Such was the case on 30 July, when returning from the Nasiriyah area on a search for retreating Turkish forces, one of the two Caudrons on the mission made

an emergency landing in close proximity to hostile Arab forces. The pilot and observer were both killed, and the machine destroyed before a search party could reach the area.<sup>14</sup> The death of the two aviators, caused in part by engine failure, prompted a change in the conduct of air operations. Consequently, restrictions were emplaced on long flights between locations outside of established lines of communication and beyond the control of friendly forces.

General Nixon had requested from the GOI more aeroplane reinforcements prior to the onset of the Nasiriyah operation. This request was in turn forwarded from the Viceroy of India to the India Office in London, which by the end of June prompted the War Office to send to Mesopotamia two flights of RFC machines and personnel from Ismailia, Egypt. Additionally, because India could not secure an adequate supply of either machines or trained personnel, the War Office in London assumed responsibility for the air detachment in Mesopotamia. Any further requests by commanders in Mesopotamia would henceforth be forwarded directly to the War Office, vice through India.<sup>15</sup>

On 5 August, all personnel assigned to the air unit in Mesopotamia were assigned to the RFC (merging British, Indian, Australian, and New Zealand personnel). The existing air detachment would complement the forthcoming flights from Egypt, and constitute the first flight of No. 30 Sdn. By 26 August, four Martinsyde Scout machines (an improvement over the MFs) arrived in Basra as nucleus for the second flight, and by the end of October, the third flight, along with the new Squadron Commander, Major S. D. Massy would arrive.<sup>16</sup> Until Massy could arrive, Broke-Smith and Reilly were appointed temporary majors, with Reilly as the flight commander for the element already in place.<sup>17</sup>

Following the successful operations in Nasiriyah, the RFC conducted some badly needed maintenance on their fragile, weather-beaten machines. Yet the *Shamal* made any maintenance activity difficult at best. Most work had been conducted under light tent hangars, which were frequently destroyed by the strong winds. Mechanics did, however, succeed in converting two barges, capable of moving two machines and a floating workshop to assist with the upcoming advance towards Kut al-Amara. Not only did the RFC focus on maintenance. Tactically, a new signaling technique had been developed using 'smoke balls,' which were more readily identifiable in the desert, than using light signals.<sup>18</sup>

At the beginning of September, Major R. Gordon arrived with his RNAS flight of three Sunbeam Short seaplanes (all equipped with wireless). The Sunbeams came too late. The flooding receded, restricting the seaplanes to the Tigris, which in many places did not have a significant straight stretch of water for an adequate take off. Two of the seaplanes were in time converted to aeroplanes and greatly contributed to the flagging strength of No. 30 Sdn.<sup>19</sup>

General Nixon had been tasked by the GOI on 27 July to prepare for an advance and occupation of Kut al-Amara (north of Amara on the Tigris River). The operation was handed to Major General Townshend's 6th Division. A flight detachment from No. 30 Sdn formed on 7 September at an air refueling point north of Amara with two Martinsydes, a Caudron and a MF (which was wrecked upon arrival) to support the operation.<sup>20</sup>

The 6th Division advance proceeded from Amara on 13 September. Townshend tasked the RFC to provide aerial reconnaissance forward of the ground column of the

lead brigade. Messages from the aeroplanes were dropped in bags ahead of the column, indicating the clearest line of advance and reporting enemy activity. On 14 September, Major Reilly flew over Kut once more, and provided a refined picture of Turkish troop dispositions along the Tigris.<sup>21</sup> Major General Townshend noted how important Reilly's flights had become. "Owing to the excellent work of Major Reilly in his aerial reconnaissances, I had an accurate knowledge and sketch of the enemy's position and its entrenchments."<sup>22</sup> The reconnaissance did have its costs. On 16 September a Caudron was brought down by enemy ground fire and landed behind Turkish lines. The loss was critical to the already undersized, understaffed RFC detachment supporting 6th Division.<sup>23</sup>

The 6th Division RFC flight detachment had its difficulties with its initial four machines assigned to the operation. As already noted, the MF had crashed on arrival on 11 September, a Martinsyde crashed in high winds on the 13th, and the Caudron shot down by the Turks on the 16th, left only one operational Martinsyde for Townshend. No. 30 Sdn immediately sent reinforcements from the airpark in Basra. As luck would have it, one barge with two seaplanes was already underway when the Sdn decided to act. No. 30 Sdn moved its two barges with the third seaplane and a Martinsyde up the Tigris. No. 30 Sdn pilots flew a Martinsyde and a MF from Basra, but the Martinsyde crashed upon arrival.<sup>24</sup> The reinforcements arrived just prior to the advance on Kut, but the damage sustained enroute left only two serviceable Martinsydes to support the attack, and the three seaplanes (with wireless) available to work with the artillery.<sup>25</sup>

The attack on Kut commenced on 26 September. The RFC's two machines played a critical role in keeping Townshend in touch with his subordinate commanders.

Townshend noted that had it not been for Major Reilly's reconnaissance efforts, he would not have been able to assess what his brigades had been doing, thereby allowing him to update his own plans and reissue directives back to his commanders via the aeroplanes.

Townshend's attack on Kut was successful. 29 September aerial reconnaissance determined Turkish forces had abandoned Kut and were retreating along the Tigris to the north. The RFC's aeroplanes and seaplanes covered the retreat, and harassed the Turks with a sporadic aerial bombardment until 5 October. The RFC also reported to Townshend that the Turks had stopped their northward withdrawal and had begun to dig in at Ctesiphon.<sup>26</sup>

Major Reilly's flight detachment, with three serviceable machines, again moved north of the advance to establish a refueling point and landing strip at Aziziya, north of Kut on 6 October. The few machines that had supported the IEFD advances continued to have a disproportionate affect in relation to their small numbers on the conduct of the advance. Aerial reconnaissance played a critical role in developing plans by both Townshend along the Tigris, and Gorringe along the Euphrates. In spite of the harsh climate and lack of supplies, the small but expanding No. 30 Sdn persevered to support the multiple operations.

The subsequent attack on Ctesiphon, and the retreat to Kut are mired in controversy. Townshend recorded his objections (albeit *ex post facto*) to General Nixon in his memoirs. Townshend believed his lines of communication were already overextended, based on the erratic state of river transportation. Moreover, based on aerial reconnaissance of Ctesiphon, he believed he would need at least two full strength divisions to continue his advance, and summarily recommended a consolidation of his

forces at Kut until reinforcements could arrive.<sup>27</sup> Nixon firmly believed an advance to the north was necessary, and commented that “they [aeroplanes] have already had a most disturbing effect on the enemy.”<sup>28</sup>

October marked a consolidation point for No. 30 Sdn. Additional machines had reached Kut, adding four BE 2cs, four additional pilots, mechanics, and badly needed supplies and spare parts. ‘A’ Flight was positioned at Aziziyah, while ‘B’ Flight remained at Basra (but would deploy to Kut and Aziziyah by 9 November).<sup>29</sup> During October approximately one aerial reconnaissance was performed daily. Reconnaissance was not only conducted to the northwest towards Ctesiphon and Baghdad, but to the south towards Nasiriyah, and to the north towards the Persian frontier. The emphasis, however, was placed on Turkish activity at Ctesiphon. The position of the airpark at Aziziyah, so close to the Turkish front lines, ensured strict attention was paid to the protection of Aziziyah.<sup>30</sup>

These reconnaissance flights lasted approximately two and a half hours each: significant because each engine required a complete overhaul after twenty-seven hours of use. Despite the overhauls, engines continued to have problems in the harsh climate, placing the airmen of No. 30 Sdn at considerable risk.<sup>31</sup>

As a prelude to the operation at Ctesiphon, one of the more daring and unique missions assigned to the RFC during the Campaign, played out on 13 November. Captains White and Yeats-Brown volunteered to fly a machine behind Turkish lines at Baghdad to cut the telegraph lines leading to Turkey. Their machine landed in a sparsely populated area eight miles from Baghdad where telegraph wires were leading to the west. During landing, the machine clipped a telegraph pole, preventing the machine from

taking off again. The two men succeeded in blowing up one telegraph post before Turkish forces attacked them. They both attempted to taxi their machine away as they had done on previous occasions, but could not escape and both were captured.<sup>32</sup>

On 20 November, Townshend began his advance to Ctesiphon. Four machines were flown nine miles south of Ctesiphon to the town of Lajj as the new forward operating location, with the main RFC force still at Aziziyah and Kut. One of the more critical junctures (or failures) of the campaign soon ensued. Major Reilly was tasked to survey the Baghdad area on 21 November. Reilly flew north and noticed a significant change in Turkish positions to the east of Ctesiphon, and large numbers of Turkish reinforcements. He changed his mission to further survey the buildup in Ctesiphon rather than proceed to Baghdad. Unfortunately, his machine was hit with shrapnel, and he was forced to land near Turkish positions. Reilly was captured by Arabs and handed over to the Turks. Not only did Townshend not receive a full accounting of the change in Turkish force strength, but also the Turkish commander received an intelligence coup, as noted in a post-war report:

The map containing this priceless information fell, not into the hands of the enemy commander [Townshend] . . . but into those of the Turkish commander . . . Major Reilly's greatest gift to us was a sketch showing the course of the Tigris from Diyala to Aziziya. This little stretch, 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 no such thing as a map.<sup>33</sup>

Reilly had been one of the aviators who Townshend had held in high esteem, and

Townshend noted his loss:

Major Reilly, the brilliant aviator, who had been of utmost assistance to me in the campaign by his daring reconnaissances and his excellent eye sketches of the enemy's positions was lost on this afternoon. . . . It was very unfortunate at this moment to lose such a valuable officer.<sup>34</sup>

The attack on Ctesiphon began on 22 November. With one working MF and a converted seaplane supporting the attack, the state of aerial support to the offensive was tenuous, albeit still of value to Townshend. However, by 22-23 November, with increasing casualties within 6th Division, and an increasing intensity of Turkish counterattacks, Townshend decided he could not sustain an offensive under these conditions. Townshend ordered a withdrawal to Lajj under cover of darkness on 25-26 November. By 3 December, the remainder of 6th Division fell back to Kut, with the RFC and RNAS machines observing the rate of advance of Turkish forces, and periodically dropping hundred pound bombs on Turkish infantry and cavalry formations.<sup>35</sup>

Townshend prepared for the Turkish siege of Kut al-Amara, and ordered the departure of all operational aeroplanes; seaplanes departed on 4 December, and the RFC machines on 6 December. However, because of unserviceable machines still behind in Kut, five RFC officers, their support barges, and three unserviceable machines were left behind in Kut--a crippling blow to the already fragile No. 30 Sdn.<sup>36</sup> Townshend believed the departing machines could still support his effort for defense of the city.

At the request of the flight commander, I allowed aeroplanes to go down river . . . I required of him constant aerial observation of the enemy's movements down river. . . . He [Major Massy] said this could be done; but up to 10 January only four visits were paid us by aeroplanes. . . . No doubt there were serious reasons why my requests were not complied with.<sup>37</sup>

Indeed, there were good reasons why so few machines were sent to cover the Kut area. On 10 December, General Sir Fenton J. Aylmer, Adjutant General of the Indian Army arrived in Mesopotamia to command a relief force for Townshend's forces. The 'Tigris Corps' would comprise the remnants of Gorringe's XII Division, and elements of the 3rd Lahore and 7th Meerut Divisions, which were arriving, albeit slowly, in Basra.<sup>38</sup>

The RFC, already crippled by the loss of men and materiel at Kut, had only two machines available to support Aylmer's Tigris Corps. Major Gordon, RNAS, submitted a review of the state of the RNAS detachment at the time. Gordon believed the RNAS should be reinforced to outfit a complete squadron to support any new operations.

I submit therefore that this detachment, if it is to remain in this country, must be reorganized and equipped as a complete squadron. It is useless to send out a few machines as a few stores and ratings to carry on with. It must be equipped with the proper establishment for a squadron of men, machines and stores and in addition its own water transport, as land transport at present is an encumbrance.<sup>39</sup>

Gordon summarized the present and forecasted accessions of seaplanes totaling twelve machines--a significant change in the status of any aviation arm, either RFC or RNAS. In addition to the emphatic request for new machines, Gordon decried the state of training of his aviators and mechanics. "Untrained men here are useless, there can be no repair bases to train them in, as the forces are seldom stationary, and every repair is a field repair."<sup>40</sup>

The Tigris Corps counterattack proceeded, but in terrible weather. The bad weather hampered RFC and RNAS efforts at observation, but nevertheless, reconnaissance support was provided whenever possible to Aylmer's forces. A 26 February telegram from Aylmer noted "I must confess that I have been disappointed with the action of the Cavalry Brigade on the whole . . . I have, perhaps, not called on my cavalry to push home reconnaissance regardless of loss as aerial observation has generally been available and is better."<sup>41</sup>

Aylmer began to receive the long-awaited aerial reinforcements forecasted by Gordon. Yet the dilemma faced by IEFD was that the RNAS had an abundance of machines, but lacked trained pilots. No. 30 Sdn had the pilots, but lacked the machines. A

compromise was made and a temporary composite flight was created to support the Tigris Corps. Simultaneously a new type of machine had arrived in Basra for the RFC. Two steel-framed Henri Farman machines, along with four BE 2c machines, and Gordon's five Short seaplanes. The frames and engines for the Henri Farmans were better suited for the harsh climate in Mesopotamia than their wooden and cloth predecessors, and had already been battle tested in operations against the Germans in German Southwest Africa and in British East Africa.<sup>42</sup> To further consolidate the composite flight, on 28 February orders stated the RFC and RNAS would consolidate as one service under army administration. Wing Commander R. Gordon, Royal Navy, would command the composite unit.

A renewed vigor was instilled in the air service unit due to the worsening situation for the 6th Division in Kut, and the introduction of a new element into the war. Turkey had been reinforced with German aircraft. Townshend reported his garrison noticed the first enemy aeroplane on 1 January, conducting reconnaissance of the Tigris Corps.<sup>43</sup> Squadron Commander Massy notes Kut's observations of enemy machines, but reported his pilots did not observe first-hand an enemy machine until 12 February.

Indeed, in early 1915, a German officer had moved to as Chief of Aviation in Turkey. By 15 October 1915, the Germans had flown twenty-four aeroplanes to Turkey to support operations in the Dardanelles. After the allied withdrawal from Gallipoli, many of the machines were transferred to Mesopotamia.<sup>44</sup>

Thirteen February saw the first German aerial bombardment of Kut, which Townshend noted had a negative impact on morale. "A German monoplane came over the town and dropped five bombs in the morning and ten more in the evening. . . . I asked

the Corps Commander to let his aeroplanes bomb the Turkish main camp and hangar in retaliation.<sup>45</sup> This sentiment was echoed by others, “The worst frightfulness to which the Turks treated us was undoubtedly the bombs dropped from their aeroplanes.”<sup>46</sup> The German airbase at Shumran Bend was visible from Kut, and Townshend managed to give warning to No. 30 Sdn via wireless when aeroplanes were sighted, but usually too late for the RFC to react.

The Germans repeated their attacks on 14-15 February. In response, Townshend ordered the emplacement of anti-aircraft guns around the city--yet the bombing continued. On 1 March, over forty bombs were dropped on Kut. Townshend lamented, “Though it was the heaviest bombardment we had yet undergone, we suffered a loss of only nine killed, twenty-eight wounded. Our improvised anti-aircraft guns and machine guns were of practically no use, the aeroplanes flying about over us with impunity.”<sup>47</sup> A notion that Douhet will highlight in *Command of the Air* in 1921.

On 18 March, Kut was hit once again, prompting Townshend to call upon the RFC once more. “I asked Corps by wireless to retaliate by sending aeroplanes to bomb the Shumran camp, and to drop a smoke-ball over two big naval guns we could see being placed in position, so as to give us range.”<sup>48</sup> The mission was conducted successfully, but had little impact on the German aerial bombardment of Kut. By 22 March, the Germans began using incendiary bombs on the city.

No. 30 Sdn did attempt to retaliate against the German aerodrome at Shumran Bend. However, Major Massy did not believe that his Sdn had sufficient resources to conduct an effective bombing on the enemy aerodrome.

Bombs were only occasionally carried. The reason of this was partly because of their questionable value except when used in quantities by large numbers of aeroplanes and partly because, having so few machines, it was considered wiser not to risk the loss of any by causing them to fly low over the object to be hit and thus presenting an easy target to the enemy's guns and rifles.<sup>49</sup>

Remarking on their inefficacy against the aerodrome, Massy noted,

On one occasion in February, this aerodrome was made the object of attack by bombs. Four machines dropped fifteen bombs, aiming at his hangars. One bomb pitched just behind a hangar, the after end of which was seen to collapse. At that time he was known to possess three aeroplanes. . . . On the day following the raid his machines were not seen in the air, but on the day after that two of them were seen up at the same time. It is apparent therefore that the damage done could not have been very great.<sup>50</sup>

Major Massy had hopes of engaging the enemy in the air however. Upon receiving a wireless message from Kut about enemy air activity, Massy launched his own machines, now armed with Lewis Guns, to intercept. Massy also worked out with the Kut garrison a system of ground signals to warn his machines already in the air about enemy aeroplanes. Yet Massy noted that by the time his men were notified of an approaching enemy, it was usually too late to be useful. "For about six weeks our machines always assumed the offensive at sight but failed to catch the enemy."<sup>51</sup>

Meanwhile, the Tigris Corps continued a number of unsuccessful attempts to relieve the 6th Division at Kut. The situation was growing desperate inside the besieged city. Air reconnaissance continued to track the movement of Turkish forces opposing the Tigris Corps. Massy, Gordon, and the Tigris Corps Commander (now led by Lieutenant General Gorringe, who replaced Aylmer on 12 March) were faced with the dilemma of allocating the finite resources of the RFC to support the Tigris Corps and the 6th Division at Kut. In reply to Townshend's request for bombing of the German aerodrome, the risk was declared too great to devote more resources. Gorringe needed the machines for

artillery observation and in fact delayed one offensive in March to await the arrival of three additional machines from Basra.<sup>52</sup>

Since the siege began, the RFC had been dropping mail, correspondence, medical supplies, and other spare parts into the city. Of note, on 27 March a 70-pound millstone was successfully dropped by parachute.<sup>53</sup> Townshend commented on the potential of aerial resupply: “Asked by Headquarters how much food I required per day, I replied that I wanted 5,000 pounds.” However Townshend was skeptical of how much service the RFC could provide without hindering other missions that the Tigris Corps might require. Townshend calculated that based on diminishing supplies in the city, aerial resupply would be the sole source of food by 24 April, except for the rapidly diminishing horse meat supply, which was calculated to last until 29 April.<sup>54</sup>

Food resupply via air began in earnest on 16 April, but Gorringe warned Townshend that the air service would only be able to provide 3,350 pounds per day (well short of Townshend’s request for 5,000). The RFC would allocate four BE 2cs and four seaplanes to the effort, leaving only four BE 2cs, one Voison, and one Henri Farman for the Tigris Corps. “Accordingly bomb-frames were removed from machines and a hastily designed apparatus installed with quick-release gear for getting rid of the sacks of food when over Kut.” One hundred-fifty pounds of food was determined the most the machines could safely carry per mission. In total, over 140 flights were made over Kut with food supplies, with over 19,000 pounds dropped from 16-29 April.<sup>55</sup> While the garrison’s requirements were not satisfied by the quantity of food dropped, the effort was nonetheless appreciated. “The aeroplanes fed us for three or four days at the end, and it was a great treat to get a little white bread although it was only four ounces each and did

not go very far.”<sup>56</sup> A 6th Division medical officer, Major Charles H. Barber noted, “Watching food dropping became a popular amusement . . . a plane would be heard approaching; spectators would rush out and stand gasping, laughing, and chattering about it like children.”<sup>57</sup>

One factor impeding the RFC’s ability to deliver more food aid came with German attempts to attack aerial food deliveries. Subsequently, air escorts were provided, further reducing the number of machines available for food resupply. German General Von Hoeppner viewed Turkish and German air support as critical to the success of Turkish forces at Kut. “This subsequent activity [movement of machines to Mesopotamia] did a great deal towards encouraging Turkish troops to persevere until the English force decided to surrender.”<sup>58</sup>

Despite the RFC’s Herculean efforts to keep Kut supplied with food, the inability of the Tigris Corps to relieve Kut forced Townshend’s hand. He surrendered the 6th Division on 29 April, and commented, “I trust history will say that we did our duty as Englishmen and soldiers up to the extreme limit of human nature.”<sup>59</sup> The Turks captured 12,000 prisoners, only 4,000 of which would survive captivity. Of the RFC personnel also captured, insufficient records exist regarding their fate, although the Australian Official History believed six survived. Townshend did not mince words regarding the aerial relief effort. “to put food into Kut by means of the aeroplane, the first time in the war, I take it, that it had been attempted so to supply a beleaguered garrison with food . . . and I may say at once that it was a complete failure.”<sup>60</sup> A somewhat unfair critique for the RFC, base on the already critically desperate situation of the garrison at the beginning of aerial resupply.

Thus marked the end of the first major phase of the Mesopotamian Campaign and the beginning of a new direction, both militarily and politically for IEFD. With the end of this particular phase of the Campaign, did the air effort affect the conduct of operations or influence its direction?

Major Massy prefaced his review of this phase of the operation with these remarks:

The Squadron was never at any period up to its full strength. . . . Suffice to say that never before in my experience have pilots been called upon to fly machines in a less air-worthy condition, a condition exposed day and night to prolonged spells of rain, mud and wind with a minimum of spare parts for their upkeep.<sup>61</sup>

From the beginning of the air operation in 1915, the number of machines and trained pilots was minimal. Coupled with the extreme temperatures and weather, it is remarkable that these fragile machines were effective at all. However, as noted by the commanders in the field--Gorringe, Townshend, Nixon, and Aylmer, the aerial reconnaissance from the beginning was essential in determining the course of action during a number of important engagements, from Nasiriyah to the first battle of Kut al-Amara. As the Campaign progressed, leading to the battle of Ctesiphon and the subsequent retreat to Kut, the number, quality, and capabilities of the machines increased. This provided additional flexibility to the ground commanders, allowing for reconnaissance, artillery spotting, and eventually air escort, aerial bombardment, and aerial resupply.

As technology advanced during this phase, so did the RFC's capabilities. Major Massy noted that communications via wireless had significantly progressed, so much so

that by February 1916, “signaling lamps were first used from the ground but were very soon discarded as unnecessary.”<sup>62</sup>

Likewise, advances in bombardment and air-to-air combat were also made, providing the Air Service Commander with a variety of options for self-protection, and as a combat multiplier for ground commanders. This capability--virtually non-existent at the beginning of the Campaign, became nearly standard practice for most machines during 1916, and took an even greater significance in subsequent phases.

Massy’s review of the air effort was not all complementary. He also believed, as was expressed later in the War by other air commanders, that the RFC was not being used in the most economical manner, a fact that he attributes to a lack of understanding of air operations by ground commanders. As an example, Massy believed commanders were excessive in their use of aerial reconnaissance.

I think that a certain number of reconnaissances might quite well have been dispensed with, thus effecting a saving of pilots, observers and machines. . . . Is it better to get the maximum possible out of your pilots and machines for a short space of time and take the chance of their breaking down altogether or to conserve their energies as much as possible with a view to making them last as long as possible?<sup>63</sup>

Massy’s comments proved to be prophetic. His observations on the use of aeroplanes by ground commanders, unversed in the art of their employment, would continue to plague Massy’s successors in the Campaign. Nevertheless, the contribution of the aeroplane during this phase of the war was noteworthy, and of value to the commanders prosecuting the ground effort.

---

<sup>1</sup>Jones, 251-252. Because of flooding (either natural or because of sabotage to the levees), the area around Qurna flooded in February, causing IEFD to withdraw, leaving a detachment to guard a local bridgehead. (Moberly, 175.)

<sup>2</sup>Jones, 252. Barrett would later be sent back to India because of health problems, and replaced with Major General C. V. F. Townshend.

<sup>3</sup>Cutlack, 422. Quoting from Cable message dated 8 February 1915 from Viceroy of India to Commonwealth Government of Australia.

<sup>4</sup>Ibid. Quoting from Cable message dated 26 February 1915 from Commonwealth Government of Australia to Viceroy of India.

<sup>5</sup>Captain Henry Birch Reynardson, *Mesopotamia 1914-1915* (London: Andrew Melrose LTD., 1919), 114-115.

<sup>6</sup>Broke-Smith (from General Nixon's staff) and Reilly were the officers assigned as the core element of the Indian Flying Corps.

<sup>7</sup>Cutlack, 3.

<sup>8</sup>Jones, 254; Cutlack, 7; Major General Sir Charles V. E. Townshend, *My Campaign in Mesopotamia*, (London: Thornton Butterworth, 1920), 66. Interestingly, Jones notes the contributions of aeroplanes in this operation: aerial reconnaissance and reestablishing communications between Townshend and Army HQ in Basra. However, Cutlack relates that the surrender of Turkish forces along the Tigris was due in part to efforts by Captains Reilly and White, who while flying reconnaissance, dropped a small bomb, which narrowly missed the Turkish forces, but was construed as a warning shot and forced the Turkish unit's surrender. Jones relates the surrender was due to a shot fired by the Royal Navy's *Shaitan*. Townshend does not provide enough detail regarding the surrender to determine one way or another.

<sup>9</sup>Cutlack, 10. The concern about the flooding was raised as early as 12 April 1915. Ironically, by the time Commander R. Gordon arrived from East Africa with a flight of seaplanes from the RNAS, flood season had ended, restricting the seaplanes to the rivers.

<sup>10</sup>Jones, 255. This location is likely the same place reference by Townshend in his memoirs: "He [General Nixon] approved of a double company being posted 40-50 miles above Amarah on the Tigris to cover an aviation landing ground." (Townshend, 75.)

<sup>11</sup>Cutlack, 9. An unidentified RFC officer noted the Shamal, when blowing at 30-40 miles-per-hour, "a machine of the Maurice-Farman type moves backwards when flying at 600-1000 feet.

<sup>12</sup>Ibid.

<sup>13</sup>Jones, 256.

<sup>14</sup>Cutlack, 10-11; Jones, 256-257; Henshaw, 526-527. Local Arabs friendly to the British purportedly witnessed the event, and related the story of Lieutenants Merz and

Burns (an Australian and New Zealander respectively). The Arabs stated the two pilots were on the run for approximately five miles, armed only with their personal revolvers. Before they were both killed, they had killed one Arab and wounded five others. Their bodies were not found in a subsequent air search of the immediate area.

<sup>15</sup>Jones, 257; Moberly, 269. A pilot training school was established in Basra in September 1915 by the GOI. But was disbanded in 1916 after London took over direction of the war effort in Mesopotamia.

<sup>16</sup>Jones, 257.

<sup>17</sup>Cutlack, 8. Captain White, an Australian, was made adjutant and commanding officer of the Aircraft Park in Basra.

<sup>18</sup>Cutlack, 11.

<sup>19</sup>Jones, 258; Cutlack, 11.

<sup>20</sup>Jones 258.

<sup>21</sup>After the 1st Battle of Kut, prisoners confirmed that Reilly's reconnaissance over Turkish positions had caused the Turks to conceal trenches and gunnery positions from aerial observation. Townshend in his own words noted "Surprise is, of course, more difficult in these days owing to that new agent of reconnaissance, the aeroplane." (Townshend, 97.)

<sup>22</sup>Townshend, 112.

<sup>23</sup>Townshend, 110. Cutlack, referring to this incident, suggests that it was engine failure that brought the machine down. Interestingly, Townshend noted the incident, and stated, "Three or four hundred men were seen to rush out of concealed trenches and surround it [the downed Caudron] immediately . . . The ships [Royal Navy] opened fire on it and the crowd around it went to ground." (Townshend, 110) Townshend also wrote to the Turkish commander sending money and clothes for the two Australian officers, who Cutlack later notes were still alive, and eventually moved to Baghdad.

<sup>24</sup>Cutlack, 12-13.

<sup>25</sup>Cutlack, 13. Townshend noted the seaplanes were equipped with bombs. The bombs and bomb racks arrived with the barges. However, the bomb racks were not very reliable and quickly became unusable, but not before seeing action in the attack. (Townshend, 115.) Bomb sizes ranged from handheld two-pound bombs, to twenty-pound and thirty-pound bombs.

<sup>26</sup>Jones, 260; Cutlack, 14-15. The aerial bombardment was part of Townshend's plan to harass the enemy in his rear area.

<sup>27</sup>Townshend, 127-128. This information was relayed to General Nixon on 3 October 1915. Townshend noted the poor state of affairs for the allies at Gallipoli, and took into consideration the possibility of Turkish reinforcements from Anatolia. However, he acceded to Nixon's plan, noting "It was evident to me that Sir John Nixon intended me to make a dash for Baghdad with my present inadequate force."

<sup>28</sup>Townshend, 130. What affect an aeroplane reconnaissance could have over multiple entrenched enemy divisions is subject to debate, as surely Townshend likely surmised after hearing Nixon's reply.

<sup>29</sup>Jones, 262.

<sup>30</sup>Ibid. Photography at this point was still conducted with handheld devices either held over the side of a machine, or used through a hole cut in the floor of the aeroplanes.

<sup>31</sup>Cutlack, 18-19. One interesting mission had Captains White and Yeats-Brown land with an engine problem close to Turkish and Arab forces, south of Ctesiphon. While on the ground the engine continued to function, but without enough power to provide lift. The two airmen taxied their machine for fifteen miles, with Yeats-Brown standing in the rear with a revolver to protect their flank from enemy forces. Another example placed Major Gordon of the RNAS with Major General Kemball, Nixon's Chief of Staff. Gordon's seaplane was forced down near a hostile Arab camp. After their machine failed to arrive at Aziziyah in time, another machine was sent to find them. After locating their position, the pilot landed close to Gordon's machine, ran out and handed Kemball a spare rifle, got him back into the machine and took off. The Indian cavalry picked up Gordon shortly after.

<sup>32</sup>Cutlack, 21-22; Jones, 262. Both men escaped later in the war. Yeats-Brown captured the story in *Caught by the Turks*.

<sup>33</sup>Jones, 263. Quoting from *The Battle of Salman Pak*, by Staff Bimbashi Muhammad Amin, published by the Turkish Staff, privately translated by the Historical Section, Committee for Imperial Defence.

<sup>34</sup>Townshend, 170. Reilly recounted the story of his ill-fated mission after the war concluded. Both Jones and Moberly in their respective official histories comment on the possibilities of avoiding the subsequent retreat from Ctesiphon if Reilly had succeeded in reporting his information to Townshend.

<sup>35</sup>Jones, 264-265. The fighting in Ctesiphon resulted in thirty-three percent KIA figures for 6th Division.

<sup>36</sup>Jones, 265. In the retreat from Ctesiphon to Kut, British forces destroyed the barge holding all aeroplane bombs at Aziziyah to prevent its capture. (Townshend, 191.) AIR1/121/15/40/110-Massy's report claimed the men left behind comprised two pilots,

three observers, and forty air mechanics. Townshend's report showed 3 officers, 41 British and 11 Indian "rank and file" in the RFC at Kut. (Townshend, 355.)

<sup>37</sup>Townshend, 217-218.

<sup>38</sup>Jones, 266.

<sup>39</sup>AIR1/648/17/122386. "Report on Future Requirements of RN Air Service, Mesopotamia 1915-1916." Dated 6 December 1915.

<sup>40</sup>Ibid.

<sup>41</sup>Jones, 267-268. On 19 January, General Nixon was replaced by Lieutenant General Sir Percy H. N. Lake, Chief of the General Staff, India.

<sup>42</sup>Ibid., 268-269.

<sup>43</sup>Townshend, 237.

<sup>44</sup>General Ernest Von Hoeppner, *Germany's War in the Air* (Nashville: Battery Press, 1994), Originally published 1921, 48; Edward J. Erickson, *Ordered to Die: A History of the Ottoman Army in the First World War* (Westport, Connecticut: Greenwood Press, 200), 28. Erickson notes Oberleutenant Erich Serno's arrival in Turkey as January 1915. Erickson also believes that by late 1915, No. 2 Squadron (*Tayyare Bulugu*) was already in place in Mesopotamia.

<sup>45</sup>Townshend, 278.

<sup>46</sup>Lieutenant H. C. W. Bishop, "Kut and Kastamuni," *JUSII* 48, no. 412 (July 1918): 228.

<sup>47</sup>Townshend, 286.

<sup>48</sup>Townshend, 304; Jones, 277.

<sup>49</sup>AIR/1/121/15/40/110 "Short Report on Methods of Employment of the Squadron During the Recent Operations on the Tigris Line," by Major S. Massy, Commander, No. 30 Sdn, 25 May 1916, Public Records Office Document, 4.

<sup>50</sup>Ibid.

<sup>51</sup>Ibid., 8.

<sup>52</sup>Jones, 277.

<sup>53</sup>Ibid., 278. Interestingly, the officer in charge of keeping up the supply of milled flour in the besieged city was in fact an RFC officer left behind in December, Lieutenant Winfield-Smith.

<sup>54</sup>Townshend, 325; Jones, 279.

<sup>55</sup>Jones; Massy. Air 1/121/15/40/110. Jones notes 19,000 lbs flown in total. Massy noted “9,442” lbs--although he might be referring to RFC aeroplanes vice both RFC and RNAS.

<sup>56</sup>Bishop, “Kut and Kastamuni.”

<sup>57</sup>Colonel A. P. Sights, “Airlift to Kut,” *U.S. Naval Institute Proceedings* 98, no. 1/827 (January 1972): 50-52.

<sup>58</sup>Von Hoepfner, 48.

<sup>59</sup>Townshend, 337. Interestingly, Captain T. E. Lawrence, of “Lawrence of Arabia” fame, served in the negotiating party for the garrison’s surrender. (Moberly, 452-458).

<sup>60</sup>Townshend, 325.

<sup>61</sup>AIR1/121/15/40/110 “Short Report on Methods of Employment of the Squadron During the Recent Operations on the Tigris Line,” by Major S. Massy, Commander, No. 30 Sdn, 25 May 1916, Public Records Office Document.

<sup>62</sup>Ibid., 4.

<sup>63</sup>AIR1/121/15/40/110.

## CHAPTER 5

### FROM DEFEAT TO VICTORY

Directions from London in April 1916 were explicit: remain in a defensive posture to keep the Turks engaged along the Tigris. This order reflected anticipation in the War Office of a Russian advance from northern Persia towards Baghdad. Moreover, London did not want to send the wrong signal to its Arab and Muslim subjects that it was willing to withdraw because of Turkish successes. Indeed, in a telegram from the Chief of the Imperial General Staff in London to the Commander-in-Chief of India, Sir Beauchamp Duff, the policy was very prescriptive, “At present our policy in Mesopotamia is defensive and we do not attach any importance to the possession of Kut or to the occupation of Baghdad.”<sup>1</sup>

Ordered to remain on the defensive, British forces reorganized and strengthened a previously disorganized and ill-equipped logistics system. RFC machines flew reconnaissance in May (now at Shaik Saad on the Tigris River--to the west of Kut) to determine current Turkish positions. Based on RFC observations, the new logistics effort was focused on overland transport vice river transport as the most effective. London wanted to ensure the Tigris Corps would have the necessary logistics for the future.

Sir W. Robertson, Chief of the Imperial General Staff, fully realized that if forces under Sir Percy Lake [then commander of all British forces in Mesopotamia] were to retrieve the disaster that had occurred at Kut, means of transport of all kinds, whether by river, or in the form of railways, or in the matter of motor lorries and animals, must be provided on a generous scale.<sup>2</sup>

Despite the optimism of ground commanders for a reinvigorated logistics system, General Gorringe reflected a gloomy opinion on the state of the RFC versus its Turkish-German opponent. Moberly captures Gorringe’s assessment:

On 14th May, General Gorrington reported that the mastery of the air had passed into the hands of the enemy. His Fokker aeroplanes were of greater fighting efficiency than the British machines; and the British air personnel and machines were also feeling the strain of the work at high pressure which had preceded the surrender of Kut and which had come after months of continuous work without a rest. As a result, there were many casualties among the pilots from sickness and a large proportion of the aeroplanes were unfit to fly, while for various reasons the seaplanes were no longer of any use.<sup>3</sup>

Gorrington wrote his dire report on the condition of the RFC in the hope that such a damning statement would prompt London to provide the Tigris Corps with better equipment and more personnel. Gorrington's request was timely indeed. On 11 June, enemy aeroplanes became more aggressive in attacks beyond Kut. German machines directed Turkish artillery fire, destroying three British ammunition barges on the Tigris, to the west of Shaik Saad, followed by aerial bombardment of the British 13th Division later in the month.<sup>4</sup> Gorrington's appeal would be realized, but not before the Tigris Corps underwent a major reorganization in structure and leadership.

Despite the defensive posture along the Tigris, mid-June discussions between Generals Lake and Gorrington focused on the possibility of a limited offensive. However, due to 120 degree and above daylight temperatures, and serious bouts of cholera amongst the troops, offensive action was ruled impractical. To support his claim that an offensive would be unsupportable, Gorrington noted to Lake that between April and May 1916, the Tigris Corps had suffered 22,000 casualties from combat and disease, and more importantly, the logistical infrastructure had not been rebuilt to support offensive operations.<sup>5</sup>

If the state of the Tigris Corps was insufficient to deter an offensive, the Russians added another factor for Tigris Corps to continue its defensive posture. On 28 June, the

Russian advance halted and was forced back in the face of superior Turkish forces. The possibility of Turkish forces moving into Persia alarmed the GOI, who feared Afghanistan falling in with Turkey, thus destabilizing India's Northwest Frontier.

Major General Maude, former 13th Division Commander, assumed command of Tigris Corps on 11 July, based on a recommendation from the Imperial General Staff.<sup>6</sup> Maude inherited a force rehabilitating its logistics and reorganizing its ground components. The RFC too, was reorganizing. In June, RNAS machines and personnel were withdrawn back to Egypt, leaving two Voisin machines along with parts and supplies behind. The withdrawal in June marked the low point for No. 30 Sdn. Major Massy noted in his diary, "From eight pilots in April, the Squadron Flights in the field suddenly dwindled to two pilots and finally to one pilot each. All the others went to hospital, more or less seriously knocked up, directly after the strain due to the feeding of Kut was over."<sup>7</sup> Massy further reported that German air units had attained air superiority, based on the state of his squadron, giving German machines virtually free reign in the air.

The withdrawal of the RNAS left the total number of pilots in country at seven, and as Massey noted, of these only a handful were able to fly. The situation soon changed, likely based in large part to Gorringer's earlier request for more pilots and more capable machines. By 9 July the squadron was back up to nineteen pilots, and by 19 July, the squadron increased the number of machines from twelve to eighteen. The squadron was also placed under the organizational umbrella of the Middle East Brigade, headquartered in Egypt, which was now responsible for all air squadrons in the Middle East. Major Massy also succumbed to the hostile climate, and was moved out of country due to ill health. On 31 July, Major J. E. Tennant arrived in theater to assume command

of the squadron, bringing along with him other pilots with experience from the European theater--important because along with them came new tactics; notably, night flying and advances in aerial bombardment.<sup>8</sup> As a British cavalry historian noted of this period, "Perhaps the most vital element in the transformation of the British force [in Mesopotamia] was the advent air power."<sup>9</sup>

No. 30 Sdn began August with thirteen operational BE 2cs, seven machines in overhaul and seven unloading at port in Basra. Tennant noted upon his arrival, "The personnel of the squadron were severely understrength and most of them sick men unable to leave their tents many days of the week."<sup>10</sup> Coinciding with the rebirth of the RFC in Mesopotamia, Major General Maude (having risen from Tigris Corps Commander to GOC Mesopotamian forces, replacing General Sir Percy Lake in August) commented to one of his commanders, "The line held by your division is to be held offensively, not defensively; that is to say, it has been secured as a jumping off place for future aggressive operations as the opportunity offers."<sup>11</sup> Maude's directive to his officers suggested the defensive posture ordered by London in April was to be short-lived.

No sooner had new personnel and equipment arrived than the RFC began offensive operations against the German-Turkish air units at Shumran Bend. The first air-to-air combat kill by a British machine occurred on 13 August, where a Fokker was shot down over Shumran. This action was immediately followed by the first night bombing on 14 August, against the German aerodrome at Shumran. Tennant's goal was to diminish the enemy's morale by taking the fight to German aeroplanes directly. By November, the RFC had regained air superiority.<sup>12</sup> Tennant believed the new offensive spirit in his unit

had impacted German morale, “After this [first air-to-air kill], aerial combats were intermittent, and the enemy seemed to lose his appetite for close action.”<sup>13</sup>

After the initial RFC operations against Shumran, the tempo subsided, allowing No. 30 Sdn to engage in other support activities. Bombing of Arab encampments was conducted “most mornings” resulting in the Arabs moving away from British formations. Also Tennant detailed four machines to support artillery operations. Tennant made note that wireless had been fitted in all his machines, increasing the efficiency of artillery spotting with the ground forces. No. 30 Sdn additionally engaged in map making, providing detailed coverage of an area of forty square miles around Kut-al-Amara.<sup>14</sup>

By 14 September, Maude was formulating his options to go on the offensive. More favorable weather conditions were forecasted for the winter months, and he reported back to London that his forces were better served remaining along the Tigris to threaten an advance on Baghdad, although at the time he was unable to do so. Maude believed the threat of his divisions on the Tigris might pin down the Turks, and provide some relief to the Russians in Persia.<sup>15</sup>

No. 30 Sdn was continually active throughout the rebuilding effort by the ground forces. On 23 September 2 BE 2cs bombed Shumran aerodrome and destroyed one enemy machine and damaged another. On 2 November another attack destroyed an additional machine on the ground with a twenty-pound bomb. Aside from engaging the German air unit at Shumran, the RFC also bombed other objectives based on priorities from Maude: Arab camps, Turkish positions at Kut al-Amara and Baghdad, and river bridges along the Tigris. Tennant called the targeting of Arab and Turkish forces “fine sport for our men.”<sup>16</sup> Along with aerial bombardment, the RFC continued to expand its

photo-reconnaissance abilities. A systematic photographic reconnaissance of the Tigris north of Shaik Saad was undertaken, providing a more comprehensive mapping of the area. Additionally, Turkish positions along the river were depicted, allowing their subsequent bombardment by the RFC.<sup>17</sup> Noting the increased capabilities of air-artillery cooperation, Tennant commented, "In a desert country with efficient aerial observation it is impossible for an enemy to alter his dispositions without discovery."<sup>18</sup>

The persistent pressure by No. 30 Sdn on the German air unit at Shumran had some unintended consequences. The Germans began to develop countermeasures to thwart aerial bombardment by the RFC. Tennant observed,

The enemy made 'dugout' hangars for his machines, and placed dummy aeroplanes on his aerodrome. He also organized a system of flares along all routes of possible approach by our aeroplanes . . . it was not encouraging to the pilot to watch these flares as he continued along his way, and wondered what sort of reception was in store for him.<sup>19</sup>

Nevertheless, the bombardment of the aerodrome continued to have a demoralizing effect on the soldiers and airmen at Shumran, evidenced by captured Turkish soldiers from the area who were very upset that the RFC could not only fly at night but bomb as well. Yet the Germans were still able to fly some missions against British targets, particularly the RFC aerodromes, but Tennant believed such attempts were "half-hearted," based on the height the Germans were dropping bombs (to avoid anti-aircraft fire and interception by the RFC). However, each German attack was "answered within a few hours by one of double the magnitude. Six or seven of us would go off in formation and, taking our time, bomb Shumran scientifically."<sup>20</sup>

The RFC showed growing flexibility in its ability to adapt to new missions. As already noted, the squadron had already conducted aerial resupply, night bombing, and

increasingly was becoming adept at air-to-air combat. Yet another mission conducted by the RFC was search and rescue.<sup>21</sup> Aeroplanes also dropped propaganda leaflets to sway the opinion of Arab tribes, or demoralize Turkish soldiers (or German airmen).<sup>22</sup>

On 15 November, General Maude reorganized the Tigris Corps into two Corps (I Indian Corps and III Indian Corps) in preparation for an offensive. Maude's plan called for III Corps to focus on the area in the vicinity of Shumran, and I Corps on the area in the vicinity of Sanniyat. Both objectives would be to force a river crossing and clear Turkish forces from the right bank of the Tigris. The advance over the river would allow Maude's forces to recapture Kut al- Amara, and prepare the battlefield for an eventual move on Baghdad, prompting one officer to remark, "Great events were at hand."<sup>23</sup>

During the reorganization, Maude became concerned with his eastern flank along the Persian border. While maintaining his forces along the Tigris and Hai rivers, he could ill-afford to divert troops to take on additional requirements. The RFC was tasked to provide the flank support. Tennant devised a plan to provide the necessary flank protection and convince Persian nomads of British might. "To impress him [the Wali of Pusht-i-Kuh] six of us flew out one fine morning in close formation to locate his camp . . . and executed 'stunts' over the top. There was obviously great excitement below; it was the first time these folk had seen a flying machine."<sup>24</sup>

On 13 December 1916, the artillery bombardment began for Maude's new offensive. Maude's primary task for the RFC was for No. 30 Sdn to prevent German aerial reconnaissance from determining I and III Corps' primary avenues of advance. I and III Corps established a series of observation posts with wireless or telephones to alert No. 30 Sdn to any incoming enemy aeroplanes. Tennant placed two Martinsyde Scouts

on alert to scramble in the event the enemy was sighted.<sup>25</sup> RFC counter-reconnaissance proved successful in keeping German machines at bay. Aeroplanes not specifically tasked for counter-reconnaissance kept Corps and Division commanders abreast of enemy movements opposite their positions, and bombed targets of opportunity.<sup>26</sup> Maude wrote, "The troops have done splendidly, and the reconnaissance work of the Flying Corps has been quite first rate and most useful to us."<sup>27</sup>

British successes led General Maude to continue his advance to contain Kut al-Amara. The RFC supported with counter-reconnaissance, artillery spotting, and bombardment. Tennant remarked, "During the day any column that was caught in the desert would almost certainly spotted and attacked from the sky, its horses stampeded and casualties inflicted."<sup>28</sup> As the advance towards Kut continued, RFC began bombing camps deep in the enemy rear--as deep as forty-five miles above Kut--to disrupt enemy resupply. From 19-22 December, RFC dropped approximately two tons of bombs on Turkish supply depots north of Kut, significantly impacting resupply capabilities, and causing confusion and panic at the Depot.<sup>29</sup>

20 January 1917 marked two significant watersheds for the RFC. Of importance to the morale of the unit was the first aerial bombardment of Baghdad since 1915: three machines targeted a munitions factory with six 100-pound bombs (which failed to detonate), but the reconnaissance gleaned on the Baghdad and Ctesiphon area was critical to Maude's staff. Additionally, the RFC reorganized: Tennant was promoted to Lieutenant Colonel and placed in charge as Officer Commanding, RFC, Force 'D'. Captain de Havilland was placed in charge of No. 30 Sdn. This reorganization reflected expected increases in manpower and machines for the Mesopotamian Theater.<sup>30</sup>

The British offensive was slowly eating away at Turkish positions. Maude's forces had succeeded in capturing significant portions of the Hai and Tigris line, taking over 2,000 prisoners. RFC's artillery spotting had been so critical to the success of the operation up to this point, that the GOC of Royal Artillery for III Corps telegraphed Tennant on 16 February stating, "Please accept yourself and convey to your squadron warmest thanks of all artillery III Corps for constant and invaluable cooperation which alone rendered possible close support of infantry."<sup>31</sup> Maude now planned for his final assault across the river at the two separate locations (Shumran and Sanniyat). Again, the RFC was tasked with countering German aerial reconnaissance. Tennant and de Havilland devised an innovative tactic of sending multiple sorties against Shumran, armed with bombs to strike the aerodrome at the first sign of any activity. As the operation progressed, one Martinsyde was kept over Shumran to force to the ground any German machine attempting to take off. This activity was kept up all day, with RFC machines relieving one another over Shumran.<sup>32</sup>

Maude's forces had succeeded in crossing the Tigris at multiple points, and retreating Turkish forces were in disarray by 24 February. Tennant allocated fourteen machines for artillery cooperation at this critical juncture, and had conducted over nine bombing sorties dropping over a ton of ordnance on Turkish forces. Maude gave Tennant "*carte blanche*" to attack retreating forces.<sup>33</sup> Tennant moved RFC forces into Shumran as its new forward operating location, and subsequently began pursuit of a demoralized force. Tennant describes the ensuing carnage,

Flying towards Azizieh the spectacle was amazing and horrible; dead bodies and mules, abandoned guns, wagons and stores littered the road, many of the wagons had hoisted the white flag, men and animals exhausted and starving lay prone on

the ground. Few of these, if any, survived the attentions of the Arab tribesmen, hanging around like wolves on their trail. Further on I came up with the rear party on the march. Flying along about ten feet from the road I mowed down seven with one burst of machine-gun fire; it was sickening; they hardly had the strength to run into the nullahs and fire back; those hit just crumpled up under their packs and lay still; others waved in token of surrender and supplication for rescue. . . . No scene can be so terrible as a routed army in a desert country. I turned home sickened.<sup>34</sup>

As British forces made a rapid advance up the Tigris, so too did No. 30 Sdn, creating another advance base at Aziziyah.<sup>35</sup> As III Corps pressed towards Baghdad, bypassing an abandoned Ctesiphon, another daring air mission was conducted well to the north of Baghdad. Two Royal Engineers, along with explosives, were flown forty miles north of Baghdad to destroy a major bridge carrying the sole paved road north from the city--the mission was unsuccessful due to lack of appropriate explosives. The RFC continued to provide reconnaissance of Turkish positions around Baghdad, limited artillery spotting, and conducted a successful bombing attack on the railway leading from Baghdad.<sup>36</sup> The rapid advance carried I and III Corps into Baghdad by 11 March, where again No. 30 Sdn moved to occupy the German aerodrome.<sup>37</sup> As a parting gift to the RFC, the Germans painted on the wing and fuselage of a damaged Fokker, "With kind regards to our British comrades; the German airmen . . . God Save the King."<sup>38</sup>

The RFC played a critical role in Maude's offensive to recapture Kut and eventually Baghdad. Tennant and de Havilland's aggressive tactics against German air units changed the balance in the air. When Kut al-Amara fell in April 1916, German forces had air superiority. The tide had now turned. An infusion of new men and machines, along with aggressive new tactics, changed the balance in favor of the RFC by the end of 1916, in time to ensure enhanced support to Maude's forces.

Following the victory over Turkish forces in Baghdad, Maude divided his force into four columns, each with separate objectives. One column was to advance to the west to secure the lines of communication along the Euphrates to prevent Turkish forces from damaging levees that might flood Baghdad; another column was to advance to the northwest to follow retreating Turkish forces and link up with Russian units in northwest Persia. The remaining two columns would advance to the north along both banks of the Tigris, securing the approaches to Baghdad. The RFC was to support the advance on all three fronts simultaneously, with no reinforcements.<sup>39</sup>

Tennant voiced his frustration in supporting the multiple fronts,

The demands of each column for continual aerial observation, regardless of the necessary limit to the revolutions of the engine, became impossible to meet. Under central control during the fighting for Kut and the advance on Baghdad it had been possible to coordinate work, avoid duplication, and in spite of the heavy demands keep engine overhauls fairly up to date. Before, there had been one front; now there were three. Machines were now detached and decentralized under the command of junior officers at the mercy of any staff officer of the formation with which they were working. Aeroplanes were a new toy to many of the staff, who sometimes possessed little idea of the first principles of their use or how to work them efficiently, economically, to full advantage. . . . Such situations were murderous to effectual cooperation.<sup>40</sup>

I Corps forces, supplied with detailed reconnaissance data from the RFC made a rapid advance to the west along the Euphrates, securing Falluja by 19 March. However, the British column advancing to the northwest (two brigades of 14th Division) towards Khanaqin on the Mesopotamian and Persian border did not have the same success. Aerial reconnaissance reported Turkish troops moving southeast from the Persian frontier towards the advancing British column.<sup>41</sup>

During this timeframe, Tennant received word that new German machines had arrived in theater (Halberstadts and some Fokkers), which would undoubtedly have to be

dealt with, in conjunction with supporting the multiple fronts.<sup>42</sup> Requests were forwarded from Mesopotamia, asking London for newer types of machines, specifically Spads, which were then employed in Europe. Because the Spads would have to be moved from England, a small number of Bristol Scouts were transferred from Egypt to Mesopotamia by 17 April to bolster Tennant's RFC units in the meantime.<sup>43</sup> Although not quite Spads, Tennant remarked, "These Bristols . . . could not be considered a match for the Hun Halberstadt. Fortunately, long superiority over the enemy had bred the utmost confidence in our pilots, and we had by this time collected a dauntless gang of cheerful souls quite firmly convinced that they were second to none."<sup>44</sup>

Tennant was dispatched to establish contact with Russian forces to ascertain their intentions, and succeeded in finding the Russians on 2 Apr.<sup>45</sup> Meanwhile, III Corps under General Marshall continued an advance north along both banks of the Tigris, periodically encountering Turkish forces. Fighting between both forces continued, but Marshall's orders were to advance northwards towards Samarra (halfway between Baghdad and Tikrit). By 18 April, Marshall's forces had wrested control of Samarra from the Turks, who continued to withdraw to the north.<sup>46</sup> Operations north along the Tigris, in conjunction with operations in the northwest towards Persia, and to the west, protected Baghdad's flanks, and allowed the RFC and ground forces to take advantage of the looming summer heat to regroup and conduct maintenance.<sup>47</sup>

During the summer months of 1917, the RFC continued aerial reconnaissance (albeit during the early morning and early evening owing to the extreme temperatures), and formed a refresher course for pilots and observers in Baghdad to teach new tactics and methods being employed in Europe. Additionally, the RFC was reorganized once

more, transforming the RFC (still composed of one squadron and a kite balloon unit) as the 31st Wing, still under the organizational umbrella of the Middle East Brigade in Egypt.<sup>48</sup> The RFC also had the chance to fly General Maude for the first time, which Maude recorded in a letter home, “I had a capital flight by aeroplane . . . as there was a strong *shamal* blowing, which made us rock unpleasantly at times. I went out in daylight and flew back by moonlight, so that I had the experience of day and night flying.”<sup>49</sup> Maude’s flight caused India to cable him noting their reservations that the senior military officer should fly in an aeroplane, but Maude replied, “The answer seems to be you can lose your life walking down stairs.”<sup>50</sup>

The 31st Wing also conducted some aerial bombardment of Turkish positions along the Tigris in answer to German air attacks on British positions. Additionally, elements of No. 30 Sdn supported a brief offensive to the west of Falluja towards Ramadi, but ultimately to no avail due to temperatures in excess of 120 degrees in the shade.<sup>51</sup> Also, No. 30 Sdn aeroplanes supporting the northwest advance, aside from providing reconnaissance (now conducted in groups of two to three machines for self-protection) were kept engaged bombing bothersome tribes threatening the flanks of British forces (with a great deal of success). “If a tribe got out of hand a raid could leave the next morning and bomb and machine-gun any village within a 100-mile radius. Such immediate and drastic action inspired terror in the Arabs.”<sup>52</sup>

By 13 August the long-awaited aerial reinforcements arrived. No. 63 Sdn (with RE 8s and Spads), commanded by Major J. C. Quinnell arrived in Basra from England. Despite a battle-tested cadre, the arrival during the most extreme temperatures witnessed eighty percent of the officers and roughly sixty percent of the rank and file hospitalized

with heat stroke and other ailments--an inauspicious beginning for the new airmen.<sup>53</sup>

Tennant lamented, "Bushrah [Basrah] was doing its 'damndest' to destroy humanity." By mid-September a detachment of No. 63 Sdn deployed forward to Samarra to establish a new aerodrome. Unfortunately, the first few weeks of operations were marked by the loss of three machines due to mechanical failure and a possible air-to-air loss. However, by November 1917, the squadron was up to full strength, equipped with a flight of Spads, and was a significant contribution to 31st Wing's capabilities in country.<sup>54</sup>

As temperatures cooled in September, Maude's forces were once again on the move. First focus was to the west along the Euphrates at Ramadi. The RFC (B Flight, No. 30 Sdn, operating from Madhij) had made detailed maps, photos, and sketches over the preceding week, enhancing the ground commander's awareness of the terrain and the disposition of Turkish forces. By 29 September, British forces had captured the city and approximately 3,500 prisoners. No. 30 Sdn played a critical role in development of the plan of attack based on the photos and maps of the Ramadi area.<sup>55</sup>

After securing Baghdad's western flank, Maude turned to the northwest of Baghdad, towards the Persian border and across the Diyala River. By 18-20 October, Maude's forces had pushed Turkish forces back across to Qizil Ribat and the RFC moved forward to support operations along this flank (C Flight, No. 30 Sdn, operating from Shahraban--at the west base of a small mountain range to the west of Qizil Ribat). "Our aeroplanes engaged him retreating along the Kara Tepe [Qara Tepe] road. . . . The retreating columns were attacked from the air, and panic and dismay beset the worn out Turks."<sup>56</sup>

German machines continued to harass the RFC in the northwest. In response, the RFC bombed the German aerodrome at Kifri on 16 October. With Turkish forces still withdrawing from the Qizil Ribat region, C Flight withdrew to Baquba, south southwest of Shahraban, where it joined A Flight, recently arrived from Baghdad.<sup>57</sup>

From Baquba, the two flights continued reconnaissance of the Persian border, covering Turkish movements and bombing Turkish forces. On 31 October, in support of I Corps' northward push up the Tigris, No. 30 Sdn bombed Kifri from its base in Baquba, sustaining significant damage during the raid. Of the six machines involved, three were shot down--two pilots safely recovered.<sup>58</sup> Tennant characteristically observed, "Our operations had generally been preceded by an aerial attack on the enemy's air unit on the threatened front. . . . The extraordinary dash and contempt of danger with which it was carried out must have left its mark."<sup>59</sup>

By late October, Maude's focus remained on the Tigris, to secure any avenues of approach towards Baghdad. No. 63 Sdn, now supporting 7th Division to the north of Baghdad, conducted reconnaissance just north of Samarra, indicating Turkish XVIII Corps preparing for an offensive. Maude quickly ordered 7th Division to advance and attack the Turks. However, the Turks opted to withdraw to Daur, under observation of No. 63 Sdn, rather than engage British forces. By 2 November, 7th Division engaged Turkish forces at Daur, forcing remaining units to retire to Tikrit, which in turn was captured by British forces by 5 November.<sup>60</sup> No. 63 Sdn had encountered difficulties working with 7th Division. Many newly arrived Indian units had never worked with aeroplanes in coordinating artillery fire, resulting in confusion during the first few encounters with the Turks. The problem was resolved by 5 November.<sup>61</sup>

During this operation, General Marshall noted a unique air tactic employed by German pilots,

During the battle an enemy aviator played a clever trick on the Cavalry division out on the flank. The hostile aeroplane flew over and was heavily fired on by artillery . . . then it was suddenly seen to nosedive and come hurtling towards the ground amidst cheers from the cavalry. But within 300 feet of the ground the plane straightened, the aviator dropped bombs on the assembled horses and men, doing considerable damage.<sup>62</sup>

Overall, Tennant was satisfied with the capabilities of his new machines.

However, the new apparatus that allowed the machine gun to be fired through the propellers was a continual source of concern. The synchronization of the gear was problematic and the “infernal” gun continually jammed during operations, due to the climate and maintenance. The jamming of these “infernal guns” resulted in many missed opportunities during air-to-air engagements against their German counterparts, and would plague the RFC throughout the remainder of the war.<sup>63</sup>

On 19 November, General Maude died of cholera, and was replaced by GOC III Corps, General Marshall.<sup>64</sup> Marshall determined (correctly) that the western and northern flanks of Baghdad had been secured, but remaining Turkish forces to the northwest along the Persian border in the vicinity of Qizil, remained a threat. To defeat the remaining Turks, Marshall devised a multi-pronged attack, with a cavalry unit to the north of the Adhaim River to cut the Turkish escape routes, supported by C Flight, No. 63 Sdn, and III Corps to attack directly at Qara Tepe, supported by two flights of No. 30 Sdn, who were based at Qalat al Mufti. Additionally, the remnants of the Russian cavalry in Persia were to converge on Qara Tepe from the east.<sup>65</sup>

Marshall knew well the abilities of his air support. His first flight in an aeroplane took place in theater in December 1916 with Major de Havilland of No. 30 Sdn. He noted,

With that expert flyer De Havilland as pilot I made my first trip in the air and was taken safely over the Turkish lines and brought equally safely and comfortably back to our starting point. From this first experience I realized that proper training of an observer is a matter of time and practice . . . in fact I grasped that in air observation one should first severely limit one's objectives.<sup>66</sup>

RFC operations prefaced the ground attack with an attack against the German aerodrome at Kifri on 30 November and 1 December to hinder the Germans ability to observe British movements--but with limited success--German machines were able to conduct reconnaissance on 1-2 December.<sup>67</sup>

The III Corps attacked on 3 December, yet the British cavalry, having been observed the previous day, met stiff resistance, and were unable to advance to cut off Turkish lines of withdrawal, which allowed Turkish forces facing III Corps to successfully withdraw. Both No. 63 and No. 30 Sdn flights maintained contact with the withdrawing forces to the north of Kifri, bombing and gunning rear elements. Having forced the Turks from their positions, III Corps consolidated from Qizil Ribat to Khanaqin on the Persian border.<sup>68</sup>

The Turks and Germans continued to recognize the importance of deception with regards to countering RFC aerial observation. A captured memo from the III Corps operations noted, "In order to deceive the aeroplanes from the time they are in sight, the infantry battalions will at once take the road towards Jebel Hamrin. . . . They will continue their march till the aeroplanes have disappeared . . . then they will return to their

own camp.” However, Tennant writes in response, “It was an old ruse and we knew it well.”<sup>69</sup>

After III Corps consolidated its lines, an operational pause ensued, mostly determined by bad weather. 31st Wing used this time to press its attack against German air units, “to keep a vertical draught up the enemy,” now located at Tuz Hurmatti (eighty-five miles north of Baquba) and Humr, to the north of Tikrit. Repeated air attacks on 17, 27, 28 December by No. 63 and No. 30 Sdn inflicted significant damage on German machines; although not enough to keep the Germans from reprisals, which they succeeded in conducting on 31 December against No. 63 Sdn aerodrome at Samarra.<sup>70</sup> The 31 December German attack prompted a large retaliatory raid by both squadrons on 3 January 1918, where twelve machines dropped over a ton of bombs at Humr, resulting in three air-to-air engagements, though none were conclusive. Again on 21 January, 31st Wing tasked twelve machines against Kifri (reoccupied by German machines), and on 25-26 January five more machines against Humr and five machines against Kifri.<sup>71</sup>

In March 1918, RFC was further reinforced with the arrival of No. 72 Sdn, under Major H. W. von Puellnitz, arrived from England on 2 March. Immediately upon its arrival, A Flight was dispatched to Samarra to work with No. 63 Sdn; B Flight sent to Baghdad to support GHQ; C flight at Mirjana, forward of the Diyala river on the Persian border. Tennant noted that after the arrival of No. 72 Sdn, the 31st Wing numbered over 1,000 men and a hundred officers.<sup>72</sup>

Despite months of quiet on the Euphrates front, Turkish reinforcements were noted building up at Hit (west of Ramadi), prompting Marshall to move against the build up. The British offensive commenced on 19 February, supported by A and B Flight of

No. 30 Sdn, and A Flight of No. 63 Sdn. Major de Havilland, Squadron Commander for No. 30 Sdn was ordered to bomb the Turkish positions, resulting in a ten-machine raid on 23 February, with seventy-five twenty-pound bombs dropped. De Havilland commented, “horses stampeded, transport disorganized, one aeroplane on the aerodrome at Hit destroyed and others damaged and several hits were made on camps.”<sup>73</sup> Despite the British advance, Turkish forces continued to withdraw to the west along the Euphrates. No. 30 Sdn moved from Baquba to Ramadi on 1 March, and moved further west to a forward location on 9 March to support the continued advance west.

RFC was tasked with bombing retreating Turkish forces to support the ground commander’s offensive. One of the heaviest aerial bombardments of the Campaign followed on 8 March, when No. 30 Sdn began the raid dropping thirty twenty-pound bombs on enemy columns. “From dawn to dusk” on 9 March, the RFC dropped 147 twenty to twenty-five-pound bombs on the Turks, followed on 10 March with forty-five bombs. “Transport was disorganized and a scattered trail of dead and wounded marked the passage of aeroplanes.”<sup>74</sup> The Turks halted their withdrawal at Khan Baghdadi, but Marshall opted to continue the pursuit.

Marshall wanted to ensure that the Turks would be unable to continue their westward retreat, and formulated a plan to flank the Turks at Khan Baghdadi to cut off any further withdrawal. RFC was tasked with continual observation to keep commanders abreast of latest dispositions.<sup>75</sup> On 26 March, the RFC reported the Turks remained in the city and had begun to dig in. On this word, the advance on the city began; the cavalry successfully executed a flanking maneuver to the west of the Turks, cutting off their sole direction of withdrawal. The following day, Turkish forces surrendered 4,000 troops,

including the Turkish Corps Commander. Major General Brookings, the British force commander noted, “I, having caught the Turks at Ramadi, felt that I could only do it again provided I got good and quick information. . . . This I got through the RFC.”<sup>76</sup>

The remainder of the Campaign focused primarily on the Persian border, and in fact, supported yet another expedition into Persia and the Caucasus, dubbed Dunsterforce, based on the commander of the expedition, Major General L. C. Dunsterville.<sup>77</sup> However, in Mesopotamia, General Marshall proposed to defeat Turkish forces in the Kifri area, and began an offensive on 26 April. Once more, the Turks managed to withdraw under observation and bombardment by the RFC. The British occupied Kifri on 28 April, and Marshall prepared to move again on the withdrawing Turks.<sup>78</sup> This pattern repeated itself into May: British attack followed by Turkish withdrawal, culminating with British forces entering Kirkuk on 7 May. By 24 May, the British had consolidated, and attention was turned to support General Dunsterville for the next few months.

Ground operations in Persia, coupled with General Allenby’s victories in Palestine and Syria continued to put pressure on Ottoman forces. Marshall conducted a series of flanking maneuvers to block the Turks avenue of escape. On 28 October, RFC reconnaissance established the disposition of the retreating Turkish army, conducted aerial bombardment and worked with British artillery against Turkish positions in the vicinity of Mosul.<sup>79</sup> With no possibility of escape, the remaining Turkish forces in Mesopotamia surrendered on 30 October 1918.

This phase of the Campaign stands in stark contrast to the lean days of the RFC in the first phase. For both RFC and ground forces, new leadership, equipment, and men, combined together with a renewed sense of purpose, culminated in reversing the debacle

of Kut al-Amara and paved the way for a British victory. The RFC had expanded the scope of its operations in size and complexity, and provided valuable assistance to Generals Maude and Marshall in securing victory for Britain.

---

<sup>1</sup>Moberly, III, 1-3; Jones 281.

<sup>2</sup>Major General Sir C. E. Callwell, *Life of Sir Stanley Maude*. London: Constable and Company LTD, 1920, 226-227.

<sup>3</sup>Moberly, III, 8.

<sup>4</sup>*Ibid.*, 15.

<sup>5</sup>*Ibid.*

<sup>6</sup>Callwell, 230.

<sup>7</sup>Jones, 282; Moberly, III, 22. Concurrent with the RNAS departure, a Naval Kite Balloon Section, No. 14, with four balloons arrived to work with artillery.

<sup>8</sup>Jones, 283; Moberly, III, 23. The Middle East Brigade was formed on 1 July 1916. It included Fifth Wing (14 and 17 Sdns, and No. 1 Australian Sqn; 20th Reserve Wing--for training; 'X' Aircraft Park and Depot; and No. 30 Sdn in Mesopotamia and No. 26 Sdn in East Africa. (Henshaw, 511.)

<sup>9</sup>The Marquess of Anglesey, *A History of the British Cavalry 1816-1919, Vol. 6, Mesopotamia, 1914-1918* (London: Leo Cooper, 1995), 61.

<sup>10</sup>Tennant, 21.

<sup>11</sup>Callwell, 234.

<sup>12</sup>Henshaw, 529; Jones, 282-284; Moberly, III, 23. Henshaw notes the Fokker shot down on 13 August was in the process of attacking another BE 2c when it was shot down by Lieutenants TE Lander and EAD Barr.

<sup>13</sup>Tennant, 22-23. Tennant flew in the night bombing mission on the 14th, and remarked with a typical British understatement "I arrived short of the aerodrome at a height of 400 feet, when suddenly there burst a storm of heavy and concentrated rifle fire. . . . It had been my lot during the war to come under fusillades of varying intensities, but this reception was perhaps the warmest up to date."

<sup>14</sup>Tennant, 34-35.

<sup>15</sup>Moberly, III, 43-44.

<sup>16</sup>Tennant, 48.

<sup>17</sup>Jones, 284.

<sup>18</sup>Tennant, 38.

<sup>19</sup>Ibid., 40.

<sup>20</sup>Ibid., 48. To avoid the increasingly persistent air attacks, the Germans taxied their machines continually on the airfield.

<sup>21</sup>Ibid., 45. No. 30 Sdn had been involved in a number of these missions since they began operations in Mesopotamia in 1915. Nevertheless, Tennant's first command of such took place on 6 October. A RNAS Kite balloon had broken away with two officers. A machine was sent and located the men, flying overhead to protect them until cavalry units arrived to pick them up. The same day a machine did not return from its reconnaissance mission. One of Tennant's men flew at night under moonlight and located the pilot and his machine with a signal light. A ground rescue soon followed.

<sup>22</sup>Both German and British machines were engaged in dropping leaflets on each other's positions. An 18 January 1917 RFC mission was designed to get Turkish forces, suffering under artillery and aerial bombardment to surrender, which would allow British forces across the Tigris. (See Tennant, 50 and 69.)

<sup>23</sup>Callwell, 252; Tennant, 55; Jones, 286. Tennant recalls he was at the original meeting where details describing the imminent offensive were discussed. While Baghdad was never mentioned, Tennant says there was no question that the preparations were being laid for an eventual move onto Baghdad.

<sup>24</sup>Tennant, 47.

<sup>25</sup>Tennant, 56; Moberly, III, 74.

<sup>26</sup>Tennant, 57; Jones, 287. The intensity of aerial bombardment had progressed from the early days of the campaign. On 14 Dec, Tennant was involved in a mission (unsuccessful in the end) to bomb a bridge at Shumran. Eight 20-pound bombs and four 100-pound bombs were dropped in one raid. A particularly noteworthy mission during this offensive took place on the night of the 14th/15th December. Captain Herring dropped 24 bombs during one night on a Turkish communication steamer on the Hai River, which disrupted C2 for Turkish forces on both sides of the river. Herring had to return twice to base to replenish to continue the attack. (Tennant, 62-63; Jones, 288)

<sup>27</sup>Callwell, 255. Quoting from a letter from Maude to his wife, written 15 December 1916.

<sup>28</sup>Tennant, 63.

<sup>29</sup>The largest of the raids consisted of seven BE 2cs and three Martinsydes, carrying 66 20-pound bombs and 112-pound bombs. (Tennant 64-65; Jones, 290.)

<sup>30</sup>Air1/506/16/3/38. Tennant was now Wing Commander for RFC forces in Mesopotamia. (Also see Jones, 291.) The attack on Baghdad was also against an aeroplane assembly area. (Moberly, 109.)

<sup>31</sup>Jones, 293.

<sup>32</sup>As this operation started, Tennant notes de Havilland's obsession with Shumran: "[it was his] customary occupation of bombing the aerodrome; on a near daily basis." De Havilland did succeed in shooting down one Fokker while maintaining a patrol over the aerodrome (on 18 February). Despite the daily patrol over the base, and the multiple bombs dropped on it to preclude German air activity, one German machine did manage to take off and conduct a reconnaissance of the river crossing operations, but British forces had already succeeded in crossing, negating the usefulness of the report. See Tennant, 79-82.

<sup>33</sup>Tennant, 84; Jones, 294. Regarding the effects of aerial bombardment on Turkish forces, "the general effects were demoralizing." (Jones, 295.)

<sup>34</sup>Tennant, 89. This scene is eerily reminiscent of the carnage on the "highway of death" during DESERT STORM, which caused similar feelings to be voiced by US and Allied pilots.

<sup>35</sup>Jones, 297. As British forces advanced on Aziziyah, old RFC barges were recovered, abandoned by the Turks; two usable engines were found on the barges, and immediately pressed into service. De Havilland moved fourteen machines to Aziziyah.

<sup>36</sup>Ibid., 298. After landing near the bridge, which was made of reinforced concrete, the engineers determined they had an insufficient supply of dynamite. Also, hostile Arabs threatened the machine on the ground. Nonetheless, the innovative thinking on the use of the aeroplane as a deep attack tool continued to be emphasized. De Havilland was successful in destroying a train on the railway out of Baghdad. Over forty-seven bombs were dropped on positions around the city on 7 March, to include the aerodrome at Baghdad.

<sup>37</sup>At the aerodrome, the RFC found a number of engines in working order, and the remnants of the German air unit that had been destroyed in place.

<sup>38</sup>Tennant, 106.

<sup>39</sup>Jones, 301.

<sup>40</sup>Tennant, 122-123.

<sup>41</sup>Jones, 302-303. 30 Sdn detailed B Flight to support this column's operations. C Flight had been assigned to support the columns advancing along the Tigris, with some elements of B Flight, which were moved back to assist this effort. A Flight remained at Baghdad to support GHQ. (See Tennant 122.)

<sup>42</sup>Tennant, 126. Tennant believed twelve machines had arrived based on intelligence reports. Also Jones, 304. "The balance of air superiority in Mesopotamia altered with arrival of new German fighters." Henshaw, 530.

<sup>43</sup>Jones, 305.

<sup>44</sup>Tennant, 134-135.

<sup>45</sup>AIR1/36/15/1/247; Tennant, 136-137. On a subsequent 9 April visit to the Russians, Tennant comments, "... we came upon the bivouac of an infantry battalion . . . and to my surprise there was also a brass band. They [the battalion] had no ammunition; they had no food or forage; they had come hundreds of miles over burning desert and icebound mountain passes, and through all they had stuck to their brass band . . . it struck up 'God Save the King.'"

<sup>46</sup>AIR1/36/15/1/247; Jones, 307-308. Taking note of RFC support in artillery observation, III Corps Artillery telegraphed RFC Headquarters in Baghdad, and reported "Many thanks from gunners for most valuable cooperation today. Three successive planes put in excellent work." Despite success at Samarra, on the opposite bank of the Tigris, at Istabulat, the British had a more difficult time wresting control, and it was not captured until 22 April. Enemy machines hampered observation during the operation.

<sup>47</sup>The climate had been eating away at the machines--materials became brittle with exposure and needed to be replaced. A machine in Egypt collapsed in mid-air because of the deterioration. Tennant, 167.

<sup>48</sup>Jones, 310; Tennant, 177-178. Tennant notes both RFC and German machines bombed one another's aerodromes in June, but nothing of significance.

<sup>49</sup>Callwell, 289. Quoting from letter from Maude to his wife on 28 June.

<sup>50</sup>Ibid.

<sup>51</sup>Indeed the extreme temperatures forced down three machines flying at 0430 because water in the engines had boiled away, and the pilots suffered from heat exhaustion. Jones, 310.

<sup>52</sup>AIR1/2120/207/72/4; Tennant, 163. RFC log noted temperatures were “abnormal” during this period.

<sup>53</sup>Jones, 312; Tennant, 192. Some members of the unit were so ill they were immediately sent to India to recuperate, never seeing combat in Mesopotamia. Quinell was replaced shortly after by a former member of No. 30 Sdn, Major Bradley, (Jones, 313.)

<sup>54</sup>Jones, 313; Tennant, 192. Tennant attributes 63 Sdn’s new lease on life in mid-September to the drop in temperature, which was a cool 113 degrees.

<sup>55</sup>Jones, 315; Callwell, 297. Maude flew to view the battlefield the day after Ramadi was secured.

<sup>56</sup>Tennant, 213; Jones, 315.

<sup>57</sup>AIR1/2120/207/72/4; Jones, 315; Tennant 210-211. GOC Middle East Brigade, Brigadier Salmond cabled Basra, “Many congratulations on fine work of pilots in the bomb raid at Kifri aerodrome.”

<sup>58</sup>AIR1/2120/207/72/4; Jones, 316. One pilot, after burning his damaged machine on the ground, eluded Turkish patrols for eighteen miles, successfully getting back behind British lines.

<sup>59</sup>Tennant, 218-220.

<sup>60</sup>Jones, 316-317.

<sup>61</sup>*Ibid.*, 317.

<sup>62</sup>William Marshall, *Memories of Four Fronts* (London: Ernest Benn Limited, 1929), 258.

<sup>63</sup>Tennant, 224.

<sup>64</sup>Callwell, 310; Tennant, 227. Tennant commented on Maude’s death, noting “My own work had brought me into constant contact with him, as he made a habit of giving me his requirements and discussing all matters with regard to the air personally.” Interestingly Maude had refused the same cholera vaccine he ordered for his forces prior to deployment.

<sup>65</sup>Jones, 317-319. The RFC produced almost 5,000 photos in the week leading up to the operation. (Tennant, 232.)

<sup>66</sup>Marshall, 196.

<sup>67</sup>Jones, 318-319.

<sup>68</sup>Ibid., 319. While both squadrons were engaged with operations to the north, on 5 December, intelligence from Baghdad reported a 160-camel supply convoy moving towards the Euphrates from across the desert. Remaining flights of 63 Sdn was tasked to locate the convoy. Once located, fifteen 20-pound bombs and over ten drums of ammunition were expended against the convoy, killing many of the camels and destroying supplies. Tennant reported his pilots “blew Arabs and horses to glory . . . and although a hundred and eighty miles from Baghdad, [RFC] could stretch out our arm to the exact locality and blot them immediately.” Tennant, 239; Jones, 320.

<sup>69</sup>Tennant, 238-239.

<sup>70</sup>Ibid., 241; Jones, 320-321.

<sup>71</sup>These series of engagements, while large for the theater, were inconclusive. In the 21 January raid, 30 Sdn lost one machine to hostile ground fire; the 25-26 January attacks also saw 30 Sdn lose another machine--the pilot and observer traveled over 24 miles on foot to get back to British lines; RFC managed to shoot one German machine down in an air-to-air duel in an unrelated event over Falluja; and through the course of the entire RFC operation in January, the RFC lost four machines to engine failure. (Jones, 322.)

<sup>72</sup>Jones, 324; Tennant, 259.

<sup>73</sup>Tennant, 263; Jones, 325. This initial raid was the first of many: 24 February--seven machines attacked Hit and Sahiliya, repeated that night by four machines; 25/26th--three machines against Hit aerodrome; 26th--five machines against Hit aerodrome; night of 26th--five machines against Hit aerodrome. This persistent air offensive resulted in the Germans withdrawing their remaining machines further to the west to Haditha. Over three tons of bombs were dropped during the week.

<sup>74</sup>Jones, 326.

<sup>75</sup>Ibid., 327. To enhance cooperation, one flight was attached to the 11th Cavalry Brigade--tasked to flank Khan Baghdadi; one flight to support the artillery; one flight attached to GHQ for all other missions. RFC dropped over 5,550 pounds of bombs during battle.

<sup>76</sup>Marshall, 290; Tennant, 271-285; Jones, 329. On 25 March, Tennant along with Major P.C.S. Hobart flew reconnaissance against Khan Baghdadi, but were forced down due to hostile ground fire, and both were captured. On 27 March, Major General Brookings telegraphed Brigadier General Cassels, 11th Cavalry Brigade Commander, stating “Get Tennant back.” A daring rescue ensued, and on 28 March, Tennant and Hobart were rescued. The day of his capture, Major Bradley assumed command of 31st

Wing. Tennant, after serving almost two years in theater, was sent back to England on 17 April. Marshall thought both men (Tennant and Hobart) had needlessly put themselves at risk and had them both arrested after their rescue. Both men were found not at fault and released. Ironically, Marshall then noted in his book that Tennant was “one of the finest and most intrepid flier in the Air Force.”

<sup>77</sup>See Major General L. C. Dunsterville, *The Adventures of Dunsterforce* (London: Edward Arnold), 1920. For this thesis, operations in Persia and the Caucasus will not be covered.

<sup>78</sup>AIR1/674/21/6/07, 29.

<sup>79</sup>*Ibid.*, 34-35.

## CHAPTER 6

### CONCLUSION

The Mesopotamian Campaign was not easy for the British. Extreme weather, extended supply lines, flooding, dust storms, disease, and hostile Arabs all contributed in their own way to make it hard. It was harder still for the airmen of the RFC in Mesopotamia. The RFC was hindered from the beginning of the Campaign with scarce resources in manpower and machines. Nevertheless, the RFC overcame adversity, and contributed much to the Campaign. But did the RFC have a significant affect on the outcome of the Campaign, and did it contribute to the post-war development of the RAF?

The RFC played a supporting role in every operation throughout the Campaign, from 1915-1918. Based on the number of machines alone, the impact could not be overwhelming, yet the application of airpower was disproportionate in its effects. The types of missions conducted by the RFC during the Campaign are recognizable to airmen today and while technology has advanced, the roles are chiefly the same.

The most valuable contribution of the RFC was reconnaissance. Throughout the Campaign the senior leadership commented on the critical nature of aerial reconnaissance in providing the most current information before engaging in battle--indeed some battles were actually delayed because aerial reconnaissance had not been completed (Aylmer's unsuccessful attempt to relieve Kut). As photographic reconnaissance evolved during the Campaign, it became an even more valuable tool for planning and creating detailed maps and charts for ground forces.

Artillery spotting also proved of value during the Campaign, albeit more slowly than aerial reconnaissance. The Mesopotamian Theater was no different than other

theaters, where ground commanders “had a limited appreciation . . . of the aeroplane’s potential.”<sup>1</sup> The slow development of aerial artillery spotting was due in part to the slow evolution of air-to-ground communications. Where at the onset of operations in Mesopotamia messages were dropped via sack or can, by the end of the Campaign wireless was the norm. Nevertheless, at the beginning of the war, “to the average soldier in 1915, the aeroplane remained an occasional alien intruder in an environment already different enough from that which he had been trained to expect.”<sup>2</sup>

Aerial bombardment was certainly in its infancy at the commencement of operations in Mesopotamia; tactics, techniques, and procedures being developed in Europe were slow to arrive in the far-flung reaches of the Empire. Trial and error played an important role in developing early bombing expertise in Mesopotamia. However, even in the more developed theaters of Europe, aerial bombardment was of limited utility. An early RFC bombing survey in Europe, conducted in 1915, noted that of 485 attacks using 4,062 bombs, the results were negligible, with only a handful having an impact characterized as “effective.”<sup>3</sup> Juxtapose this massive bombing operation in Europe to Mesopotamia, where initially bombing was done in single-ship or two-ship formations (prior to 1916) and the results are even bleaker.

As aeroplanes became more advanced, so did the ability to carry more ordnance, and multi-ship raids carrying larger amounts of bombs became more of the norm as the Campaign progressed. However, the end effect on Turkish forces is equally as inconclusive. Many times the result of the multi-aeroplane raids was characterized as having a demoralizing impact on the Turks. However, by the time these multi-aeroplane raids were conducted, the Turks had already been on the defensive for almost a year, with

inadequate food and water. The morale of this force, while unknown, would likely be far from good, and in the face of artillery barrages and ground attacks, the compound effect of air attacks would not likely be devastating. Yet even in instances where aeroplanes inflicted significant damage or casualties, ground commanders had still not been converted to the idea that aerial bombardment was no different than surface-to-surface bombardment, and was therefore viewed as morally inferior to infantry and cavalry fighting. Highlighting this view, Lieutenant General Bulfin, a senior ground commander in Palestine, remarked after an aerial attack to the senior air commander, “You are a butcher--you call that fighting.”<sup>4</sup>

Even so, the RFC strived to assist where it could. The greatest effects were achieved in two particular areas: offensive counter air against German aerodromes, and aerial bombardment against Arab, Kurdish, and Persian tribes.

Tennant and Generals Maude and Marshall recognized that if the RFC could deny the Turks the opportunity to observe British movements, surprise could be achieved. Thus, Tennant, as noted many times throughout his tenure in theater, was tasked to prevent enemy aeroplanes from conducting reconnaissance. Tennant and his airmen devised innovative techniques to conduct this counter-reconnaissance (an early form of offensive counter air)<sup>5</sup> and prevent the German airmen from departing their aerodrome through bombardment, or through interception of enemy machines air-to-air combat. As Tennant noted in his diaries, more often than not, the RFC was successful in precluding the Germans from observing friendly movements, although the great majority of air-to-air engagements were inconclusive.

The second effective use of aerial bombardment was found in keeping restless tribes at bay. Both Major Massy and Lieutenant Colonel Tennant remarked on the utility of well-placed bombs, or merely the presence of aeroplanes overhead, as an effective tool to keep the local populace in line. Tennant noted, "It is well to display power to the Eastern mind before negotiating."<sup>6</sup> Indeed, as early as September 1918, Sir Arnold Wilson, the Civil Administrator for Mesopotamia, commented, "I had taken part in bombing certain Kurdish villages whose occupants had murdered Political Officers, and in machine-gunning Shaik Mahmud's insurgents, and had thus learnt something of the possibilities latent in this new arm."<sup>7</sup>

Wilson's ideas, which were supported by the RAF, were met with disdain by many Army officers, who still held a negative view about the newly independent service. "A great many of the older school of soldiers (in Iraq) do not believe in the air. . . . They will not let air-power be used as it should be used."<sup>8</sup>

Nevertheless, "air control" was used, with a considerable cost savings. The Empire could not afford to garrison sizeable ground forces in Mesopotamia, and senior RAF officers pointed to the immediate post-war environment in Mesopotamia, where a local insurgency had cost 2,000 casualties to British forces, and cost over £100,000,000 to suppress; a cost Britain could ill-afford in the post-war environment.<sup>9</sup> Referring to the cost differences between air and ground forces Sir John Slessor noted in his autobiography that air control in Iraq was "justified by the results."<sup>10</sup>

Moreover, political support at home was noteworthy, with individuals such as Churchill and T. E. Lawrence openly advocating the idea. Churchill noted the utility of airpower as a useful method for air control, stating in the House of Commons on 15

December 1919, “I must remind the Honorable Members that we still have an Empire to defend. . . . The first duty of the Royal Air Force is to garrison the British Empire.”<sup>11</sup>

Trenchard, now Chief of Staff of the RAF, reinforced the notion that air control was a viable option. Of the twenty-five and a half squadrons in the RAF in the immediate post-war era, nineteen were deployed overseas to be used in an air control mode. Three of these squadrons went to Mesopotamia.<sup>12</sup>

The practice of aerial bombardment in Mesopotamia did have an impact on British air doctrine and development of strategic bombing and its ability to break the will of a people. While the bombing effort in Mesopotamia was relatively insignificant in comparison with the bombing in Europe, the effects of bombing against local populations in Mesopotamia did impact post-war procedures and contributed to the principle of air control--a policy applied in a number of areas throughout the Empire after the war.<sup>13</sup>

An additional role performed by the RFC in Mesopotamia was air escort, which remained in its formative stages during the Campaign. While escort was provided on a number of occasions, initially to protect machines conducting aerial resupply to Kut, the number of machines available in theater precluded large-scale escort. While recognizing its importance, Tennant noted “Without a fighting escort, the offensive in enemy country always lays the bombing machines open to attack by enemy fighting scouts. This must be accepted, unless the distance is sufficiently short for fighting scouts to accompany the bombing aeroplanes.”<sup>14</sup>

Additional roles played by the RFC during the Campaign were aerial resupply, leaflet drops, and search and rescue. Aerial resupply came in two forms: resupply of friendly forces on the ground, and use as a courier for communications between ground

commanders. The most notable use of aerial resupply came with the siege of Kut. Although General Townshend characterized the effort as a failure, the effort was significant based on the technology of the day, coupled with the amount of supplies moved via this technique. The aeroplane also played an important role for passing senior-level correspondence during multi-unit advances. This courier service was used during Townshend's first advance towards Kut, and was also effectively used by Marshall as his units advanced north of Baghdad along the Tigris. The use of aeroplanes for distribution of propaganda leaflets, while not significant during this conflict, amply demonstrated a capability that would be used to a much greater extent by the RAF and the US Air Force in future conflicts. Search and rescue, while not employed in support of ground forces, was important to the airmen of the RFC, and the air commanders in Mesopotamia made every effort to conduct search and rescue with their machines as the situation allowed.

RFC operations in Mesopotamia were noteworthy for significant contributions, conducted with primitive aeroplanes in a harsh climate. As new tactics, techniques, and procedures were either locally developed (such as aerial resupply,) or developed from concepts in use in other theaters (night bombing, advanced air-to-air techniques,) the RFC used these methods to support local commanders.

Despite contention regarding the effective use of airpower--issues reflected in other theaters, and voiced to some degree today by airmen--the RFC played an important role in the Campaign. And while it is difficult to quantify the overall affect on the Campaign, most commanders relied on airpower to some extent throughout, and in some cases due to flooding or bad weather, and could not have achieved the results that they did without airpower.

Because of the size and scope of the air operation in Mesopotamia, its use in this theater during World War I has not been fully investigated. The lack of coverage may be based in part on the historical focus on airpower in Europe, and the influence airpower in the European Theater had on post-war doctrine. Yet this relatively small air operation did contribute to the intellectual and theoretical development of roles and missions in the post-war era. RAF and senior British politicians were convinced of the aeroplanes value in controlling the distant reaches of the Empire based on RFC operations in Mesopotamia. Additionally, ground commanders who fought in Mesopotamia learned to appreciate the impact aerial reconnaissance could make in supporting ground maneuver. While not the largest air operation during the World War I, the airmen of the RFC in Mesopotamia contributed to the success of the British operation in Mesopotamia. Indeed, the service of the airmen in this Campaign must be regarded as extraordinary, and should be looked upon as the genesis of truly expeditionary air warfare.

---

<sup>1</sup>Cooper, 28.

<sup>2</sup>Ibid.

<sup>3</sup>Cooper, xx. Quoting from RFC HQ Memo “Bomb Dropping in the Western Theatre of War from 1 March to 20 June 1915,” PRO, AIR1/921/204/5/889.

<sup>4</sup>Dr. John Mordike, “General Sir Edmund Allenby’s Joint Operations in Palestine, 1917-1918,” *The Royal Air Force Air Power Review* 5, no. 4 (Winter 2002): 36. Quoting from a comment from Lieutenant General Bulfin to Major General Salmond, describing the carnage by an air attack on Turkish troops in Palestine. Salmond to Sykes, September 1918, “Allenby’s Victory over Turks,” AIR1/725/115/1, PRO, Kew.

<sup>5</sup>RAF doctrine defines offensive counter air operations as “operations mounted to destroy, disrupt or confine the enemy air power as close to its bases as practicable . . . within the subset of OCA, the following roles may be employed: Airfield attack against aircraft, operating surfaces and airfield facilities; suppression of enemy air defenses;

fighter sweep; escort; command and control warfare. *British Air Power Doctrine*, AP3000 3d Edition, 1999.

<sup>6</sup>Tennant, 232.

<sup>7</sup>Sir Arnold Wilson, *Mesopotamia, 1917-1920: A Clash of Loyalties* (London: Oxford University Press, 1931), 238.

<sup>8</sup>*Ibid.*, 239. Wilson quoting from a supporter in the House of Commons.

<sup>9</sup>Sir John Slessor, *The Central Blue: The Autobiography of Sir John Slessor, Marshall of the RAF* (NY: Frederick Praeger, 1957), 52.

<sup>10</sup>*Ibid.*

<sup>11</sup>Andrew Boyle, *Trenchard* (NY: W. W. Norton and Co., 1962), 354.

<sup>12</sup>*Ibid.*

<sup>13</sup>Somaliland, Afghanistan, Northwest Frontier of India, Palestine, Mesopotamia to name a few locations where air control was exercised

<sup>14</sup>Tennant, 242.

## ILLUSTRATIONS

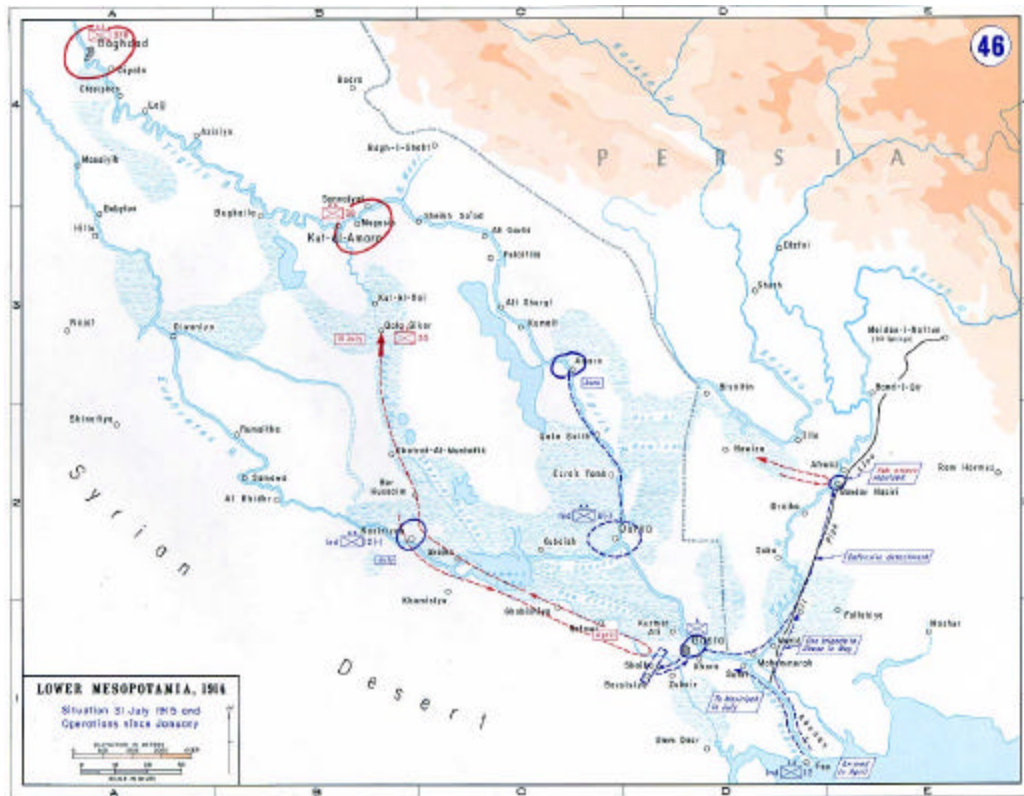


Figure 1. Map of Lower Mesopotamia. Source. United States Military Academy Department of History Map Library, Maps of World War I, <http://www.dean.usma.edu/history/dhistorymaps/ww1pages/ww1ToC.htm>, accessed 22 April 2003.

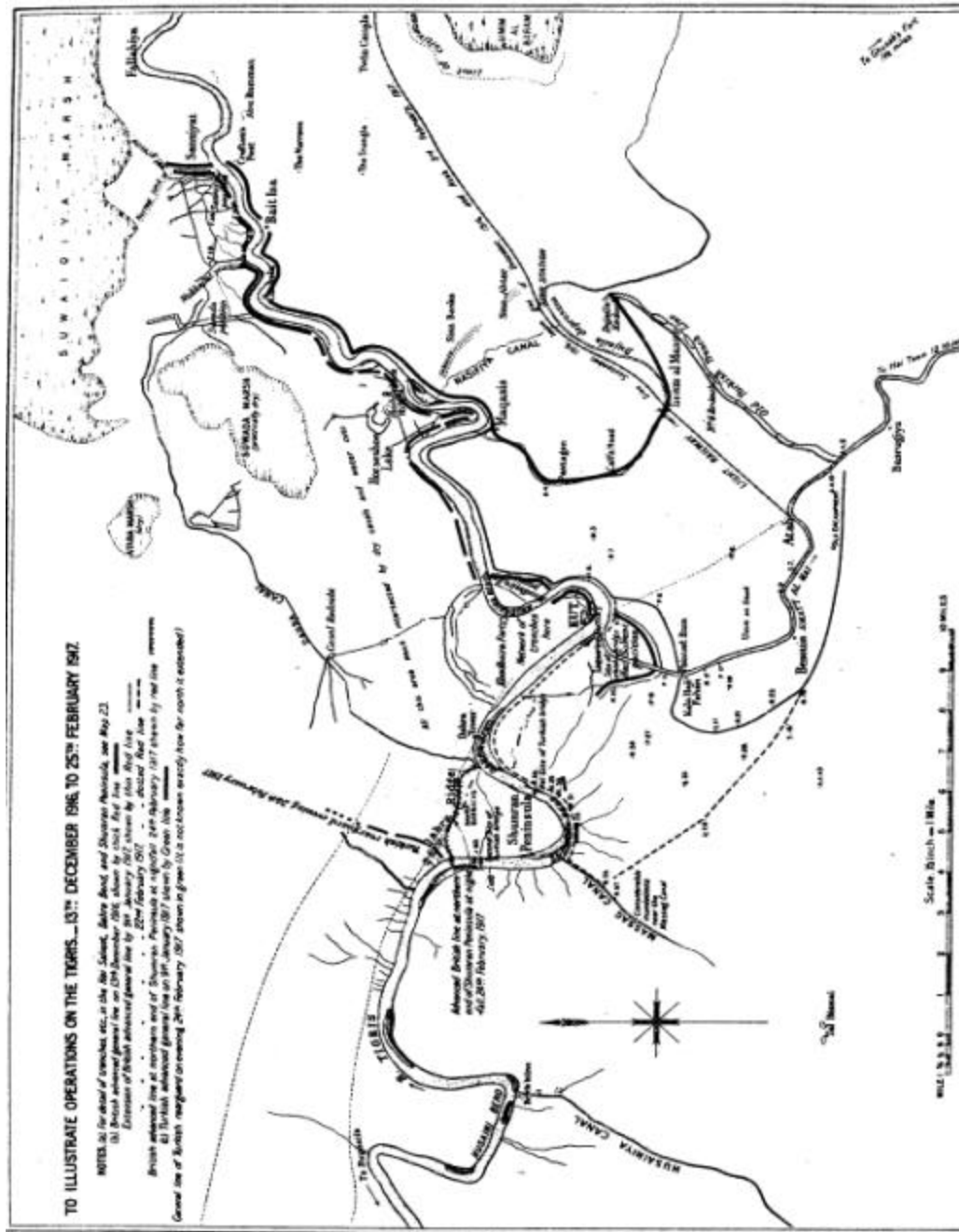


Figure 2. Map of Operations on the Tigris. Source: H.A. Jones, *The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force*, Vol IV (London: Oxford University Press, 1935), 300.

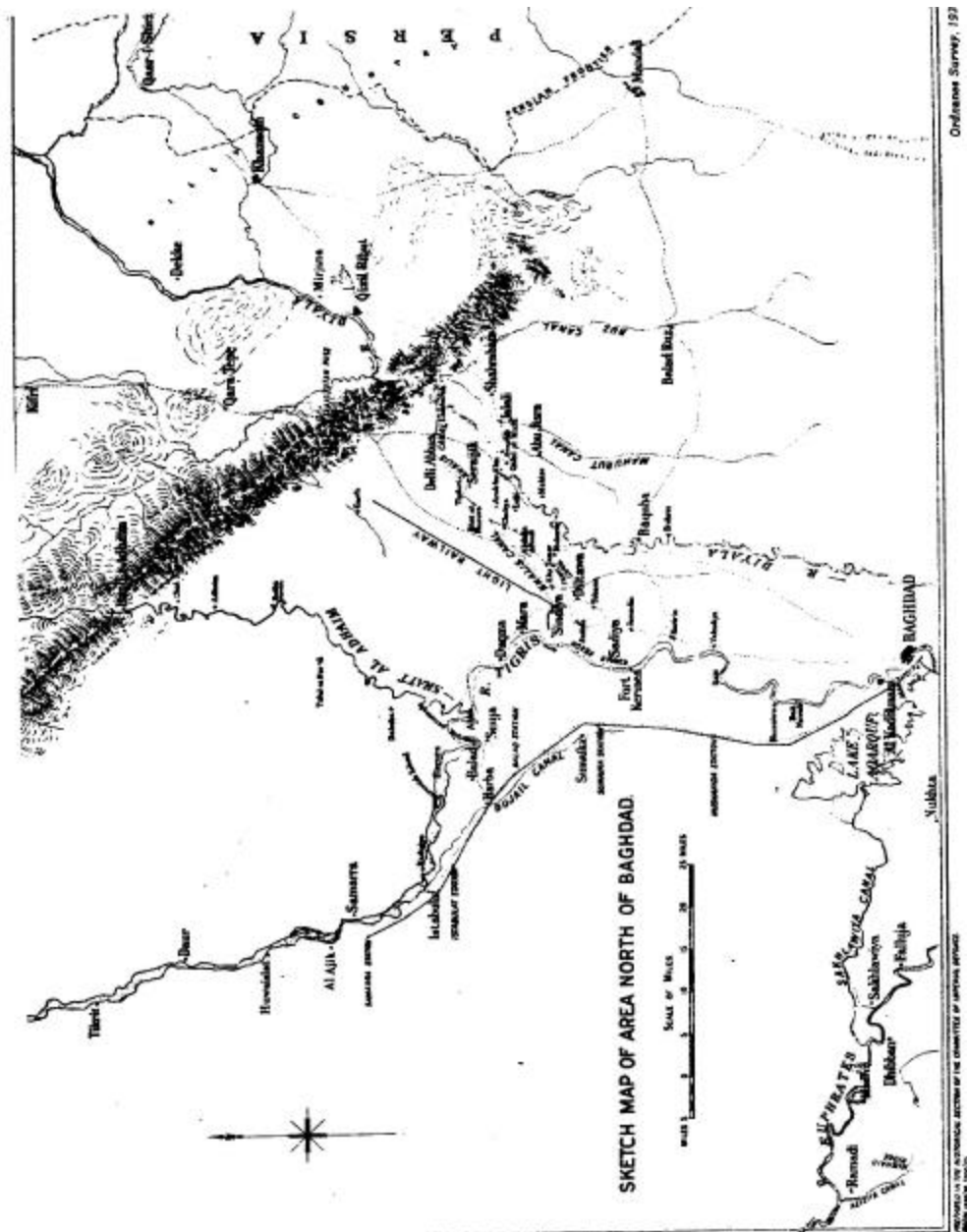


Figure 3. Map of Operations North of Baghdad. Source: Source: H.A. Jones, *The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force*, Vol IV (London: Oxford University Press, 1935), 324.

## BIBLIOGRAPHY

### Books

- Ash, Eric. *Sir Frederick Sykes and the Air Revolution, 1912-1918*. Portland, OR: Frank Cass Publishers, 1999.
- Baring, Maurice. *Flying Corps Headquarters, 1914-1918*. London: William Heinemann, 1920.
- Barker, A. J. *The Bastard War: The Mesopotamian Campaign of 1914-1918*. NY: The Dial Press, 1967.
- Beaumont, Roger. *Sword of the Raj: The British Army in India, 1747-1947*. NY: Bobbs and Merrill Co., 1977.
- Boyle, Andrew. *Trenchard*. NY: W. W. Norton and Co., 1962.
- Burne, A. H., Lt Col. *Mesopotamia: The Last Phase*. London: Gale And Polden, LTD., 1936.
- Callwell, C. E., Major General Sir. *Life of Sir Stanley Maude*. London: Constable and Company LTD, 1920.
- Churchill, Winston. *The World Crisis*. NY: Charles Scribner and Son, 1923.
- Clark, Arthur Tillotson. *To Baghdad with the British*. New York: D. Appleton and Company, 1918.
- Cooper, Malcolm. *The Birth of Independent Air Power: British Air Policy in the First World War*. London: Allen and Unwin, 1986.
- Cutlack, F. M. *The Australian Flying Corps in the Western and Eastern Theatres of War, 1914-1918*. Sydney: Angus and Robertson LTD., 1923.
- Dane, Edmund. *British Campaigns in the Nearer East, 1914-1918*. NY: Hodder and Stoughton, 1920.
- Davis, Paul K. *Ends and Means: The British Mesopotamian Campaign and Commission*. Cranbury, NJ: Associated University Presses, 1994.
- Donohoe, M. H., Major. *With the Persian Expedition*. London: Edward Arnold, 1919.
- Douhet, Giulio. *The Command of the Air*. North Stratford, NH: Ayer Company Publishers, 1984.

- Dunsterforce, L. C., Major General. *The Adventures of Dunsterforce*. London: Edward Arnold, 1920.
- Earle, Edward Mead. *Turkey, The Great Powers and the Baghdad Railway: A Study in Imperialism*. NY: MacMillan Co, 1935.
- Erickson, Edward J. *Ordered to Die: A History of the Ottoman Army in the First World War*. Westport, Connecticut: Greenwood Press, 2001.
- George, David Lloyd. *War Memoirs, Vol II*. London: Ivor Nicholson and Watson, 1933.
- Henshaw, Trevor. *The Sky Their Battlefield: Air Fighting and the Complete List of Allied Air Casualties from Enemy Action in the First War*. London: Grub Street, 1995.
- Hoffman, Bruce. *British Air Power in Peripheral Conflict, 1919-1976*. Santa Monica, CA: RAND Corporation, 1989.
- Howard, Harry N. *The Partition of Turkey: A Diplomatic History 1913-1923*. Norman: University of Oklahoma Press, 1931.
- Jones, H. A. *The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force, Vol IV*. London: Oxford University Press, 1935.
- Kearsey, A. *Notes and Lectures on the Campaign in Mesopotamia*. London: Hugh Rees LTD., 1927.
- Lewis, Peter. *Squadron Histories, R.F.C., R.N.A.S., and R.A.F, 1912-1959*. London: Putnam, 1959.
- Longoria, Michael A. *A Historical View of Air Policing Doctrine: Lessons from the British Experience Between the Wars, 1919-1939*. Maxwell Air Force Base, AL: Air University Press, 1993.
- Lucas, Charles, Sir. *The Empire at War, Volume V, India, The Mediterranean, Eastern Colonies*. London: Oxford University Press, 1920.
- MacMunn, George, LTG Sir. *Behind the Scenes in Many Wars*. London: John Murray, 1930.
- Marshall, William. *Memories of Four Fronts*. London: Ernest Benn Limited, 1929.
- Meilinger, Philip, Colonel. *The Paths of Heaven: The Evolution of Airpower Theory*. Maxwell Air Force Base, AL: Air University Press, 1997.
- \_\_\_\_\_. *Airmen and Air Theory*. Maxwell Air Force Base, AL: Air University Press, 2001.

- Moberly, F. J. *The Campaign in Mesopotamia, 1914-1918 Vols I-IV*. London: HMSO, 1923.
- \_\_\_\_\_. *Operations in Persia, 1914-1919*. London: HMSO, 1987.
- Noffsinger, James Philip. *World War I Aviation: A Bibliography of Books in English, French, German and Italian*. Lanham, Maryland: Scarecrow Press, 1997.
- \_\_\_\_\_. *World War I Aviation Books in English: An Annotated Bibliography*. Metuchen, New Jersey: Scarecrow Press, 1987.
- Omissi, David E. *Air Power and Colonial Control: The Royal Air Force 1919-1939*. Manchester, England: Manchester University Press, 1990.
- Pittman, Isaac, Sir. *A Study of the Strategy and Tactics of the Mesopotamian Campaign 1914-1918*. London: Sir Isaac Pittman and Sons LTD., 1930.
- Raleigh, Walter. *The War in the Air: Being the Story of the Part Played in the Great War by the Royal Air Force Vol. 1*. Oxford: Clarendon Press, 1922.
- Repington, Charles A'Court, Lt Col. *The First World War 1914 to 1918*. London: Constable and Company, LTD., 1920.
- Reynardson, Henry Birch, Captain. *Mesopotamia 1914-1915*. London: Andrew Melrose LTD., 1919.
- Roosevelt, Kermit. *War in the Garden of Eden*. New York: Charles Scribners and Sons, 1919.
- Schaedel, Charles. *Men and Machines of the Australian Flying Corps 1914-1919*. Victoria, Australia: Kookaburra Technical Publications PTY Ltd., 1972.
- Shaw, Stanford J. and Ezel Kural Shaw. *History of the Ottoman Empire and Modern Turkey*, vol. II, *Reform, Revolution and Republic: The Rise of Modern Turkey, 1808-1975*. NY: Cambridge University Press, 1977.
- Slessor, John, Sir. *The Central Blue: The Autobiography of Sir John Slessor, Marshall of the RAF*. NY: Frederick Praeger, 1957.
- Smith, Myron J., Jr. *World War I in the Air: A Bibliography and Chronology*. Metuchen, New Jersey: Scarecrow Press, 1977.
- Stokesbury, James L. *A Short History of World War I*. NY: William Morrow and Co, Inc., 1981.
- Strachan, Hew. *The First World War*, vol. 1, *To Arms*. NY: Oxford University Press, 2001.

- Tennant, John E. *In the Clouds Above Baghdad*. London: Cecil Palmer, 1920.
- Townsend, Charles V. E., Major General Sir. *My Campaign in Mesopotamia*. London: Thornton Butterworth, 1920.
- Turabian, Kate L. *A Manual for Writer*, 6th ed. Chicago: University of Chicago Press, 1996.
- Von Hoepfner, Ernest, General. *Germany's War in the Air*. Nashville: Battery Press, 1994. Originally published 1921.
- Von Sanders, Liman. *Five Years in Turkey*. Annapolis: United States Naval Institute, 1927; reprint, Berlin: August Scherl, 1920.
- Wilson, Arnold, Sir. *Loyalties Mesopotamia 1914-1917*. London: Oxford University Press, 1930.
- \_\_\_\_\_. *Mesopotamia, 1917-1920: A Clash of Loyalties*. Oxford University Press, 1931.
- Wise, Sydney. *The Official History of the Royal Canadian Air Force*. Canada: University of Toronto Press in Cooperation with the Department of National Defence, 1981.

#### Periodicals

- Bannerman, A., Brevet Major Sir. "The Difficulty of Aerial Attack," *RUSI* 53, no. 375 (May 1909): 638.
- Bishop, H. C. W., Lieutenant. "Kut and Kastamuni," *The Journal of the United Services Institution of India (JUSII)* 48, no. 412 (July 1918): 228.
- Blacker, L. V. S., Lieutenant. "Aviation," *JUSII* 41, no. 188 (July 1912): 245.
- Burke, C. T., Captain. "The Aeroplane as an aid to the Solution of Existing Strategical Problems," *RUSI* 55, no. 406 (December 1911): 1636.
- \_\_\_\_\_. "Aeroplanes of Today and their use in War," *RUSI* 55, no. 399 (May 1911): 623.
- Chamier, Captain J. A. G. "Notes on Aircraft," *JUSII* 43 (October 1914): 572.
- Crofton, Captain M. "The Study of the War in the Balkan Peninsula, 1912," *JUSII* 43 (October 1914): 201
- Director of Naval Intelligence. "The Possibility of Making Use of Balloons and Motor Airships in the Navy," *Journal of the Royal United Services Institute (RUSI)* 52, no. 369 (November 1908): 1502.

- Fullerton, J. D., Colonel. "Aeronautical Progress," *RUSI* 57, no. 420 (February 1913): 330-333.
- Kirke, W. M., Captain, St. G. "Notes on Aeronautics," *JUSII* 39, no. 178 (January 1910): 81.
- Lance (pseud.) "The Pursuit to Mosul, October 1918," *JUSII* 60, no. 261 (October 1930): 442-447.
- Massy, S. D., Captain. "Military Aeronautics," *JUSII* 41, no. 189 (October 1912): 452-453.
- Mordike, John, Dr. "General Sir Edmund Allenby's Joint Operations in Palestine, 1917-1918," *The Royal Air Force Air Power Review* 5, no. 4 (winter 2002): 14-38.
- Sights, A. P., Colonel. "Airlift to Kut," *U.S. Naval Institute Proceedings* 98, no. 1/827 (January 1972): 50-52.
- Stone, F. G., Colonel. "Defense of Harbours against Naval Airships," *RUSI* 53, no. 375 (May 1909): 559.
- Wright, Peter. "Main Show to Sideshow, Part 1: Captain Gerald Merton, MC, 16 & 30 Sqn RFC," *Cross and Cockade* 15, no. 1 (1984): 26-35.
- \_\_\_\_\_. "Main Show to Sideshow, Part 2: Lieutenant A.E. Lionel Skinner, MC, 30 Squadron RFC," *Cross and Cockade* 15, no. 2 (1984): 56-62.

#### Government Documents

- AIR1/674. Narrative of Operations in Mesopotamia, 7 June 1921, Public Records Office (PRO).
- AIR1/648/17/122386. "Report on Future Requirements of RN Air Service, Mesopotamia 1915-1916." Dated 6 December 1915, PRO.
- AIR1/121/15/40/110. "Short report on methods of employment of the squadron during the recent operations on the Tigris Line," by Major S. Massy, Commander, No. 30 Sdn, 25 May 1916, PRO.
- AIR1/36/15/1/247. "15 May 1917 Situation Report from Middle East Brigade, RFC, Egypt." PRO.
- AIR1/506/16/3/38. "Note from RFC to GOC-Basra: Reorganization of RFC in Mesopotamia." 11 November 1916. PRO.
- AIR1/2120/207/72/4. "Notes from War Diaries, Lieutenant Colonel J. E. Tennant, Commanding 31st Wing Royal Flying Corps." October 1917. PRO.

AIR1/402/15/239/1. "History of Aircraft Park, RAF, Mesopotamian Expeditionary Force." 1918. PRO.

British Air Power Doctrine at <http://www.raf.mod.uk/downloads/publications.html>

## INITIAL DISTRIBUTION LIST

Combined Arms Research Library  
U.S. Army Command and General Staff College  
250 Gibbon Ave.  
Fort Leavenworth, KS 66027-2314

Defense Technical Information Center/OCA  
825 John J. Kingman Rd., Suite 944  
Fort Belvoir, VA 22060-6218

Air University Library  
Maxwell Air Force Base  
AL 36112

Lieutenant Colonel K. Graham Fuschak, USA  
CSI  
USACGSC  
1 Reynolds Ave.  
Fort Leavenworth, KS 66027-1352

Lieutenant Colonel Thomas J. Toomer, USAF  
Air Force Element  
USACGSC  
1 Reynolds Ave.  
Fort Leavenworth, KS 66027-1352

Lieutenant Colonel Kevin W. Farrell  
CSI  
USACGSC  
1 Reynolds Ave.  
Fort Leavenworth, KS 66027-1352

# CERTIFICATION FOR MMAS DISTRIBUTION STATEMENT

1. Certification Date: 6 June 2003

2. Thesis Author: Major Peter J. Lambert, USAF

3. Thesis Title: The Forgotten Airwar: Airpower in the Mesopotamian Campaign

4. Thesis Committee Members:

Signatures:

5. Distribution Statement: See distribution statements A-X on reverse, then circle appropriate distribution statement letter code below:

(A) B C D E F X

SEE EXPLANATION OF CODES ON REVERSE

If your thesis does not fit into any of the above categories or is classified, you must coordinate with the classified section at CARL.

6. Justification: Justification is required for any distribution other than described in Distribution Statement A. All or part of a thesis may justify distribution limitation. See limitation justification statements 1-10 on reverse, then list, below, the statement(s) that applies (apply) to your thesis and corresponding chapters/sections and pages. Follow sample format shown below:

## EXAMPLE

| <u>Limitation Justification Statement</u> | / | <u>Chapter/Section</u> | / | <u>Page(s)</u> |
|-------------------------------------------|---|------------------------|---|----------------|
| Direct Military Support (10)              | / | Chapter 3              | / | 12             |
| Critical Technology (3)                   | / | Section 4              | / | 31             |
| Administrative Operational Use (7)        | / | Chapter 2              | / | 13-32          |

Fill in limitation justification for your thesis below:

| <u>Limitation Justification Statement</u> | / | <u>Chapter/Section</u> | / | <u>Page(s)</u> |
|-------------------------------------------|---|------------------------|---|----------------|
| _____                                     | / | _____                  | / | _____          |
| _____                                     | / | _____                  | / | _____          |
| _____                                     | / | _____                  | / | _____          |
| _____                                     | / | _____                  | / | _____          |
| _____                                     | / | _____                  | / | _____          |

7. MMAS Thesis Author's Signature: \_\_\_\_\_

STATEMENT A: Approved for public release; distribution is unlimited. (Documents with this statement may be made available or sold to the general public and foreign nationals).

STATEMENT B: Distribution authorized to U.S. Government agencies only (insert reason and date ON REVERSE OF THIS FORM). Currently used reasons for imposing this statement include the following:

1. Foreign Government Information. Protection of foreign information.
2. Proprietary Information. Protection of proprietary information not owned by the U.S. Government.
3. Critical Technology. Protection and control of critical technology including technical data with potential military application.
4. Test and Evaluation. Protection of test and evaluation of commercial production or military hardware.
5. Contractor Performance Evaluation. Protection of information involving contractor performance evaluation.
6. Premature Dissemination. Protection of information involving systems or hardware from premature dissemination.
7. Administrative/Operational Use. Protection of information restricted to official use or for administrative or operational purposes.
8. Software Documentation. Protection of software documentation - release only in accordance with the provisions of DoD Instruction 7930.2.
9. Specific Authority. Protection of information required by a specific authority.
10. Direct Military Support. To protect export-controlled technical data of such military significance that release for purposes other than direct support of DoD-approved activities may jeopardize a U.S. military advantage.

STATEMENT C: Distribution authorized to U.S. Government agencies and their contractors: (REASON AND DATE). Currently most used reasons are 1, 3, 7, 8, and 9 above.

STATEMENT D: Distribution authorized to DoD and U.S. DoD contractors only; (REASON AND DATE). Currently most reasons are 1, 3, 7, 8, and 9 above.

STATEMENT E: Distribution authorized to DoD only; (REASON AND DATE). Currently most used reasons are 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

STATEMENT F: Further dissemination only as directed by (controlling DoD office and date), or higher DoD authority. Used when the DoD originator determines that information is subject to special dissemination limitation specified by paragraph 4-505, DoD 5200.1-R.

STATEMENT X: Distribution authorized to U.S. Government agencies and private individuals of enterprises eligible to obtain export-controlled technical data in accordance with DoD Directive 5230.25; (date). Controlling DoD office is (insert).