

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

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Royal Air Force

by
Wing Commander H. L. THOMPSON

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September 1915 - December 1945

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NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

PER ARDUA AD ASTRA

Per ardua ad astra

—Motto of the **Royal Air Force**

The Royal Air Force, created during war in 1918 by the fusion of the Royal Flying Corps and the **Royal Naval Air Service, took the motto under which the RFC had trained and fought. The words were first suggested by Lieutenant-Colonel J. S. Yule, OBE, then a young officer in the Royal Engineers, to a brother officer who had joined the RFC. It was one evening in May 1912, when ideas for a motto for the new air arm were being sought, that the two men were walking down from the **Royal Engineers**' Mess on Laffan's Plain to the shed where Colonel Cody kept his 'strange machine'. After various ideas had been discarded, Yule suddenly hit upon the now famous phrase. His suggestion was forwarded to Whitehall where, after some doubts and discussion of the Latin, it was finally accepted. The motto may be rendered as 'Through the steeps to the stars' or 'Through difficulties to glory', but the Latin words, now pregnant with meaning to so many, are such an apt and true expression of all **RAF** effort and endeavour that they hardly need to be translated.**

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

[FRONTISPIECE]



London burning, 29 December 1940

London burning, 29 December 1940

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

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**New Zealanders with the
Royal Air Force**
Volume I: EUROPEAN THEATRE
September 1939–December 1942

Wing Commander H. L. THOMPSON

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NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

FOREWORD

Foreword

By Marshal of the Royal Air Force Lord Tedder, GCB

I HAVE often wondered whether anyone who was not in very close touch with our Air Forces during the War even began to realise the fantastically high standard of personal skill, determination and courage demanded of every air crew, or the skill, technical integrity and perseverance demanded of the ground crews by the daily round, the common task. Countless were the acts of almost superhuman determination and bravery which passed unknown to all but a handful or, if known, were taken for granted and passed unrecorded. The New Zealander, perhaps more than most, has a way of regarding such things as all in the day's work. One is therefore especially glad to see here a factual record of some at least of the matchless deeds of New Zealand airmen. But the reader must, in this as in any written account of air operations, read between the lines much that cannot be expressed in words if he is to get a true impression of the spirit which made New Zealand airmen such grand comrades working with their colleagues from the other Dominions and the Home Country.

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,
April 1953

The occupations given in the biographical footnotes are those on enlistment.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

INTRODUCTION

Introduction

FOR centuries wars have been conducted on land and sea. But now, within the last few decades, a third and larger theatre has been found for them, one which flows over both land and sea and which more than either of these is a place of vision, of speed and freedom of movement. The advent of airship and aeroplane as weapons of war, and the possibility that the air might become a great highway for the traffic of peace, had long been foreseen. However, the visions of earlier ages and the more practical theories and experiments of the nineteenth century had to wait upon the invention of the internal combustion engine for their realisation. Even then doubts and prejudices retarded the progress of aviation and, in the military sphere, the aeroplane was regarded for some time merely as an ancillary weapon to the older forms of warfare. In the opening stages of the First World War, the machines operating on the Western Front were used solely for observation purposes such as the detection of enemy batteries, the direction of artillery fire, and the photographing of the territory immediately behind the enemy lines; machines designed expressly for aerial combat did not appear in force until the second year, and it was only towards the end of the conflict that various types of bomber aircraft were rapidly developed. Then came the Armistice, which prevented a demonstration of the full power of the new weapon.

For the next twenty years the strategic value of the new weapon was to remain a matter for conjecture since, during the period of uneasy peace which separated the two conflicts, aviation was not used as a war weapon on any considerable scale. Even when it did play a part it was under conditions not likely to be reproduced in a world struggle between major powers. In Abyssinia the Italians had things all their own way, while in **China and in **Spain** the opposing air forces were hardly**

comparable either in numbers or in quality. Nevertheless there were many prophets, chief among them being the Italian general, Giulio Douhet, who conjured up alarming visions of what might happen in future wars. ¹ These enthusiastic exponents of air power predicted sudden and ruthless attacks with high-explosive and gas bombs which would quickly smash war

¹ Douhet had commanded the first Air Battalion in the Italian Army and was appointed Commissioner of Aviation in Mussolini's first administration. His *Il domino dell' aria* (first published in 1921) subsequently achieved a wide circulation in **Europe**.

industries and centres of population. The new mechanical age was receptive to such destructive ideas and contemporary popular imagination was stimulated by such writings as H. G. Wells' *The Shape of Things to Come*.

But while the doctrine of an overwhelming bomber force striking knockout blows in the early stages gained its adherents, controversy continued in military circles with the result that, in 1939, divergent views of what air power might achieve were held by those who controlled the destinies of the principal nations. These views were strongly influenced by tradition and geographical position. The **United States**, although she had made rapid strides in air transport internally, was remote from **Europe** and her only likely enemy was **Japan**. Therefore she relied upon a powerful navy for defence and, apart from the few followers of that stormy petrel, Brigadier William Mitchell (better known as 'Billy'), was largely unappreciative of the growing importance of air power. Her air forces remained divided between army and navy and were the subject of much controversy. **France**, weakened by the First World War and distracted by political strife, was unable to maintain the development of the air arm and devoted her energies to building and holding the Maginot Line. On the other hand the totalitarian states, bent on expansion, had more readily grasped the destructive possibilities of the

new weapon. **Italy** had fashioned an air force of considerable size; **Japan** had seen that air power would aid in furthering her ambitions in the **Far East**; while **Germany**, after her disavowal of the Treaty of **Versailles**, had gone ahead with the expansion of the **Luftwaffe** which, aided by skilful propaganda, threatened to dominate the skies of **Europe**.

In Britain a few far-sighted and determined men had established a basic organisation that was to stand the test of war, but the Commonwealth as a whole, long dependent on sea power for its protection, had failed to recognise fully the advent of air power as a matter of importance in the strategy and tactics of war. The air was still regarded by many as a revolutionary and comparatively untried field in which the prophecies of a handful of visionaries had not been put to the test. And although the events of the First World War had shown that the submarine was a new and major factor, and the aeroplane a potential factor affecting sea power, the British people continued to believe that the Empire was still secure under the protection of the **Royal Navy**. Indeed it was not until the events of 1940 brought about a rude awakening that we began to realise what the coming of air power meant, not only to the security of the Empire, and in particular of **Britain** herself, but also to the conduct of the war as a whole. The lesson was driven home only at the cost of much blood and bitterness. Only gradually did we come to see the vital dependence of all surface operations on the progress of the war in the air and to understand the essential truth contained in General Smuts' conclusion, arrived at nearly thirty years earlier when aircraft were still bird-cages of wood and wire: 'It is important for the winning of the war that we should not only secure air predominance, but secure it on a very large scale.' Fortunately we were given the time and opportunity to do so.

The Second World War was to see the testing of the various theories of air power developed during the years of peace and the gradual emergence of new concepts regarding its application to the problems of warfare on land and sea. Whereas, for example, **Britain** soon found she had much to learn, particularly in the tactical field, the Germans

discovered that they had underestimated the strategic value of air forces operating at long range over land and sea. In the opening stages, when the **Luftwaffe** achieved a series of dazzling but easy victories, the principle laid down for its employment was both simple and direct. It was the theory of the blitzkrieg; ¹ the elimination stage by stage of each and every obstacle which might interfere with the free movement of the ground forces; and in the type of continental warfare which the German High Command had planned it proved highly successful. Then came the Battle of **Britain** in which the **Luftwaffe** was employed in an independent role for the first time. **Britain**, having had a brief interval in which to strengthen her air defences, survived the onslaught. But the **German High Command** did not appreciate the full significance of this failure of its air arm, and subsequent operations continued to be subordinated to the requirements of the **Wehrmacht**. Thus while the **Luftwaffe** was able to achieve further successes in **Russia** and the **Mediterranean** during 1941, it did not develop strategic operations against the **British Isles** and, as a direct result, was subsequently unable to maintain air supremacy over **Germany**. By the time the German leaders realised that they were confronted with a new situation for which their pre-war plans and designs made little provision, the initiative had passed to their enemies. Having taken note of earlier German successes and failures, the Allies had developed a wider view of air power and

¹ 'Lightning war'—a term much used by **Hitler** and Goering in public speeches as part of the campaign to produce fear of the **Luftwaffe**. The word was adopted in **Britain** towards the end of 1940 as 'Blitz', more in connection with the night raids by the **German Air Force**.

were well advanced with their plans to secure air superiority as a preliminary to victorious operations by land, sea, and air.

But the achievement of Allied supremacy in the air was not a relatively straightforward issue like a naval or land battle. It was certainly not just a series of combats between fighters; rather was it a

complex affair involving many kinds of operations carried out by many types of aircraft. For example, the bombing attacks on the enemy's oil supplies, his communications and factories, were an important contribution to Allied air supremacy in all theatres. Altogether it was a campaign rather than a battle, and one in which the advantage swung from side to side as scientific and technical discoveries were applied to the war in the air. Many found this difficult to grasp since operations designed to secure and maintain command of the air were often not visible to those who were benefiting from them and, in the early days of the war, this was a frequent cause of misunderstanding.

On the other hand, air superiority was only achieved and maintained with the aid of the land and sea forces. Supplies had to be brought by ships, and airfields had to be secured and held against the enemy land forces. Without supplies or deprived of bases, air forces could not operate. Altogether, final supremacy in the air was wrested from the enemy only after a long and bitter struggle, a long-drawn-out battle of wits by day and by night in fair weather and foul. It was neither an easy nor a quick victory. Simultaneously the enemy's communications and war industries had been brought almost to a standstill by bombing, and valuable support given to the armies in the field and to naval forces in maintaining command of the sea.

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Throughout the Second World War the air forces of the British Commonwealth were deployed as geography and strategy dictated. **Canada, for example, sent a large air force to **Europe**, and at the same time took a major share in the Empire Air Training Scheme. South Africa's main contribution was made in the **Middle East**. **Australia** and New Zealand devoted a considerable portion of their manpower to the **Pacific** and to training; both countries also sent many men to the **Royal Air Force**. In the case of New Zealand, just under 11,000 airmen went from the Dominion to serve with units in **Europe**, the **Middle East**, and South-East Asia. It is with the fortunes of these men that the present history is mainly concerned.**

The task of presenting a satisfactory account of their work has proved difficult as they were, for the most part, scattered among **Royal Air Force** units in the different theatres of war. At the same time very few records were kept by the Dominion concerning the activities of its airmen. The method adopted has been to record their work and achievements against a background of the operations of the **Royal Air Force**. It has been found convenient to divide the narrative into three parts: the first—the present volume—deals with the services of New Zealand airmen in **Europe** up to the end of 1942; this theatre will be completed in a second volume, while a third will be devoted to the **Middle East** and South-East Asia.

Many more volumes would be needed to record all the exploits of Dominion airmen during the Second World War, but as Raleigh remarks in his introduction to *The War in the Air*, 'No history can be expected to furnish a full record of all the acts of prowess that were performed in the long course of the war. Many of the best can never be known. Honours were surely earned by many who lie in unvisited graves and those who were both heroic and lucky must share their honours, as they would be the first to insist, with those whose courage was not less though their luck failed them.' Furthermore, the men who flew against the enemy were so many that comparatively few of their names can be mentioned. However, every effort has been made to indicate the contribution made by outstanding individuals and to illustrate the narrative by typical incidents in which New Zealand airmen were involved. In this matter of names, changes and promotions were so rapid during the war that the prefixes of rank often varied from month to month. Where a particular deed or part of a man's service is described, therefore, the rank held at the time of mention is given; on the other hand, where an airman is referred to in more general terms, he is given the rank held at the end of hostilities. A brief biography is given in a footnote on first mention, the rank shown being that held on discharge or at date of death.

The records used in compiling the narrative have been, for the major

part, those made available by the **Air Ministry in London**. In addition to the more personal details of service and achievement, these included the original sortie and combat reports and the mass of operational record books, files, and other documents compiled by **RAF** commands, groups, and squadrons; the despatches, memoirs, and wartime reports of various Allied commanders; the post-war interrogations and accounts of certain German leaders and many contemporary enemy documents—among them the highly secret statement kept by the **German High Command** of their daily aircraft losses and replacements.

The written record has been supplemented as far as possible by individual accounts and interviews, and such sources have supplied many of the liveliest things in the volumes. Unfortunately, however, the squadron war records are often sketchy, particularly in the first years, and even when surviving airmen set down what they remember, the whole war lies between them and those early days and their memory is often fragmentary.

It has been felt necessary, for the proper perspective of the narrative, to begin with a short account of the development of the **Royal Air Force** and the growth of New Zealand representation in its units up to the outbreak of the Second World War.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 1 – THE ROYAL AIR FORCE AND EARLY NEW ZEALAND REPRESENTATION

CHAPTER 1

The Royal Air Force and Early New Zealand Representation

FOLLOWING the achievement of the Wright brothers in flying the first power-driven machine in 1903 at Kitty Hawk, North Carolina, **France** led the way in the diverse experiments that took place in **Europe**. **Britain**, cautious in accepting new ideas, lagged behind and it was not until June 1908 that the first flight over English soil was made by **A. V. Roe** at Brooklands. However, between that time and 1912 when the British Government took a hand in the building up of an air service, many private organisations began, and with this birth of British aviation the names of men like Butler, Rolls, Sopwith, de Havilland and the Short brothers will always be associated. Their experiments in frail and unsteady machines make a story which is an epic in itself. In fact, the national air service was built up out of the mass of material offered by the skill and intelligence of such men.

For some time, however, the question of whether the new force should be a separate branch of the armed services was the subject of much controversy, and although the **Royal Flying Corps** was first formed as a separate arm in 1912 with naval and military wings, naval tradition proved too strong and soon led to the establishment of the **Royal Naval Air Service**. The Royal Flying Corps then became a distinct military body. It was partly because of this dual development that, during the early years of the First World War, the air services were the subject of much confusion and delay in the matters of equipment and supply. The Royal Flying Corps in particular had to pay heavily in losses of both men and machines and it was only the untiring efforts of men like Viscount Trenchard,¹ who took command in **France** at the end of 1915, that carried the force through very difficult times. Previously, as commandant at **Farnborough**, Trenchard had 'not only produced more

¹ Marshal of the Royal Air Force Viscount H. M. Trenchard, GCB, OM, GCVO, DSO, Legion of Honour (Fr), Order of St. Anne (Rus), Order of Leopold (Bel), Distinguished Service Medal (US),

Order of St. Stanislas (Rus), Croix de Guerre (Bel), Order of the Crown of Italy, Order of the Sacred Treasure of Japan; England; born 3 Feb 1873; joined Royal Scots Fusiliers, 1893; seconded RFC 1912 and RAF 1918; permanent commission RAF 1919; commanded first Wing of RFC, France, 1914; appointed to command RFC, France, 1915; founded Independent Force in France, 1918; first Chief of Air Staff, RAF, 1918–29.

squadrons than had been thought possible at the start, but he instilled into them that high spirit which persisted throughout the war and has been handed on as a tradition to this day'.¹ But at the end of 1916 the Germans were well on the way to mastery of the air over the Western Front, and this fact, together with the subsequent bombing of London in daylight, aroused such general misgivings about the state of British air power that the government of the time was forced to appoint a committee of inquiry. This was presided over by General Smuts, and in the now famous report which was submitted to Lloyd George's cabinet in August 1917, he declared:

The time is rapidly approaching when the subordination of the air service can no longer be justified. It can be used as an independent means of war operations As far as can at present be foreseen there is no limit to the scale of its future independent war use. And the day may not be far off when aerial operations with their devastation of enemy lands and the destruction of industrial and populous centres on a vast scale, may become the principal operations of war to which the older forms of military and naval operations may become secondary and subordinate.

About the same time Winston Churchill, with similar foresight, advocated 'not merely an ancillary service to the special operations of the Army and Navy but an independent arm co-operating in the general plan'.

Nevertheless there was still opposition to any change from both the Admiralty and the War Office so that it was not until April 1918 that the

Royal Air Force was formed as an independent service, absorbing both the **Royal Flying Corps** and the Royal Naval Air Service. Then, before the newly instituted force could show its paces, the war came to an end. A period of economy and retrenchment followed in which the young air force was cut down and little effort made to keep it up to date in equipment; indeed for a long time its few surviving pilots went on flying obsolete aircraft left over from the war. Even the principle of an independent service was continually opposed and was only maintained largely through the tenacity and courage of Trenchard, who had now become the first Chief of Air Staff. Indeed, throughout the period between the wars, when the British people were gripped by a strange mixture of idealism and pacifism, Trenchard was to remain a stalwart advocate of a strong and separate air force.

Fortunately, the **RAF** quickly justified its continued existence by providing an economical means of controlling certain vital areas of the Empire. It was found that aircraft possessed the great advantage of being able to visit the scene of incipient unrest within a few hours of the receipt of news, whereas the organisation of a

¹ *History of the Air Ministry*, C. G. Grey (Allen and Unwin).

military expedition took time, during which the trouble might spread. A strong air contingent in the **Middle East** and a somewhat smaller force in **India** soon became a cheap substitute for part of the military garrison in those areas, while in **Iraq** the main control was actually transferred from the Army to the **Air Force**. The modest operations which followed went far to maintain the continuity of the air weapon in British hands and, in the **Middle East**, to familiarise personnel with a theatre of war which was later to prove vital. Many men who served in these regions found compensations for the hardships they endured; there were frequent changes of scene, different types of flying activity and encounters with fresh people. For those who, as **T. E. Lawrence** wrote, 'flew with their minds and imagination', it was the

most interesting part of their service career.

At the same time the air routes linking various parts of the Empire were being developed. Although these were eventually taken over by commercial firms, it was the **Royal Air Force** which blazed the trails by making the initial flights, reconnoitring territory, deciding upon landing grounds and then covering each route as a service exercise before handing it over. The flights across wide tracts of uncivilised and strange country, often under conditions of extreme heat and discomfort, demanded qualities of resource and endurance, and there is little doubt that such arduous and adventurous operations furnished the best possible experience and training to be found in peacetime. Other long-distance flights, apart from those connected with Imperial communications, were also made during the years between the wars. Records were deliberately sought since they provided opportunities for testing aircraft and maintaining a high standard of aviation. The Schneider Trophy was won outright, Everest was conquered from the air, while speed and height records were also established by **Royal Air Force** pilots.

But the force, as a whole, remained lamentably weak. Although in 1923 it had been decided that **Britain** should not be left in a condition of inferiority in air strength to any country within bombing range, this principle was never applied. In fact, never in all the years from 1923 to 1939 was **Britain** other than in a position of inferiority in the air to some power within striking distance of her shores. So slowly did expansion proceed that when the ill-fated Disarmament Conference opened in 1932 **Britain** was a fifth-rate air power. The two sterile years that followed, during which the debate dragged on and **Britain's** rearmament was halted, were indeed 'years that the locusts ate'.¹ In October 1933 the

¹ 'The years that the locust hath eaten' (*Joel*, ii, 25). Sir Thomas Inskip used this phrase to describe the period 1931–35.—Quoted in Churchill, *The Second World War* (*Cassell*), Vol. I,

Germans had walked out of the conference, and from that moment the expansion of the **Luftwaffe** proceeded apace, for in spite of the Treaty of Versailles Germany had begun to create an air force even before **Hitler** came to power. By March 1935 **Hitler** felt sufficiently secure to proclaim to the world the rebirth of the **German Air Force** and to appoint Goering as its Commander-in-Chief, a post which that flamboyant personality retained throughout the war. ¹

With the failure of the Disarmament Conference and the shipwreck of all the hopes founded upon it, **Britain** reluctantly renewed the expansion of her armed forces and, in particular, of the **Royal Air Force**. But while this expansion proceeded somewhat slowly at first, its progress was guided by sound principles. **Britain** might possibly have overtaken **Germany's** lead had she been prepared to sacrifice quality to quantity, and the temptation to do so was very strong in those days. But wise decisions were taken which were to create a force superior in quality to that of **Germany**—first to build a defence capable of inflicting crippling losses on the enemy's air force should it cross the British coast, and second, to create a striking force with a hitting power at least as great as **Germany's**. Although only the first of these objectives was barely attained by the time the first serious encounters came, by taking the longer view and planning the production of the four-engined bomber, **Britain** was eventually able to achieve the second objective. If in the pre-war years one race was lost, another was won, and the **RAF** secured a lead in technical efficiency which it retained, with few exceptions, throughout the conflict. This was particularly true in the field of radar where the work of Sir Robert Watson-Watt and his team, begun in 1935, was to prove of the greatest value. Further, the decision to introduce the eight-gun Hurricane and Spitfire fighters, with all the attendant delays in design and production involved, was a courageous one. The British Commonwealth owes a great debt not only to the designers of these aircraft, Sidney Camm and the late **R. J. Mitchell** respectively, but also to those who, in their foresight, strenuously advocated this powerful

armament. But it was not only in machines that **Britain** sought quality rather than quantity. The same principle was also applied in the selection and

¹ Goering had commanded a squadron in Richthofen's Fighter *Geschwader* (Wing) in the war of 1914–18; he had met **Hitler** in **Munich** in 1922 and then became the first leader of the Nazi Storm Troops, playing a prominent part as such in **Hitler's** abortive Putsch of 1923. When in 1933 **Hitler** came to power he thus saw in Goering his perfect collaborator and a man with enough of the glory of the old Richthofen days to appeal to the popular imagination. **Hitler** therefore showered appointments on him, giving him four posts in the Government—amongst which was one of Special Commissioner for Aviation. In April 1933, when the Commissariat became the **Air Ministry**, Goering found himself as Air Minister.

training of the men to fly and maintain them. In fact, the rigorous and thorough system of selection and training developed by the **RAF** was to prove our salvation in the grim struggle that lay ahead.

An important feature of the expansion which took place during the late thirties was the large programme of aerodrome and factory construction. In eastern England there began the building of the chain of air bases from which the four-engined bombers were later to batter the German Reich, while in other areas the construction of new airfields for fighter and reconnaissance squadrons was commenced. Names later familiar to New Zealand airmen now began to appear in the lists of the new stations under construction. At the same time the industrial centres of **Britain** began the changeover from peace to war, with all the complicated planning and readjustment this involved.

By 1938, however, although these measures for the expansion of the **Royal Air Force** were steadily gaining momentum, its equipment was still very much in the transitional stage, with obsolescent types of aircraft predominating and replacements not yet available in any quantity. The **Munich** crisis, which came in September of that year, was

both a lucky escape and an incentive to further effort. Nevertheless, even after a further year of respite and accelerated progress with the various expansion schemes, the strength of the **Royal Air Force** was still inadequate for the tasks which faced it.

Fighter Command ¹ was probably in the strongest position with sixteen squadrons of Hurricanes and ten of Spitfires, supported by eight **Blenheim**, four Gladiator and two Lysander squadrons. But it had virtually no reserves of fighter pilots. Furthermore Spitfires and Hurricanes were being produced only at the rate of two a day. A system for the control of fighter aircraft in the air was being developed, under which the whole of **Britain** would eventually be divided into groups and these in turn into sectors. This organisation was closely linked with the ground defence and the air-raid warning systems. Its efficiency, however, depended on accurate and timely information regarding the movements of hostile aircraft being passed by the **Observer Corps** and radiolocation posts to Group and Command headquarters. But the chain of radiolocation stations was far from complete and communications not fully developed, while sectors were short of equipment and satellite landing grounds inadequate.

¹ The three operational commands, Bomber, Fighter and Coastal, had been created in 1936, when the former 'Air Defence of Great Britain' was abolished. A training command was established at the same time; it was subsequently subdivided into two commands for flying training and technical training. In 1938 three further commands were established—Maintenance, Balloon and Reserve.

At the end of August 1939, the fighter squadrons were deployed in three main operational groups covering roughly south-eastern, southern, and eastern England respectively. The first of these, No. 11 Group, was primarily responsible for the defence of **London**, while the others, Nos. 10 and 12 Groups, covered the vital areas of Southampton and the Tyne. However this left large regions unprotected, and it was not until late in

1940 that fighter cover could be provided over most of the **British Isles**. Meanwhile Fighter Command had the additional tasks of protecting East Coast convoys and the naval base at Scapa; it was also committed to provide support for the British Army in **France**.

Bomber Command possessed some thirty-five squadrons but many of them were not yet fully trained for operations. Furthermore ten of these squadrons were equipped with obsolescent Battles and a further ten with Blenheims. Only five had Wellingtons, and the rest of the force was made up of Whitley and Hampden squadrons in approximately equal numbers. None of the characteristic four-engined bombers which were to play so great a part in the strategic air offensive were yet available. In fact, the production of Stirlings and Halifaxes did not begin in earnest until the early months of 1939 while the Lancaster was, as yet, unknown. ¹ The bomber force was divided into six operational groups, located along the eastern side of England in areas designed to suit the range of their aircraft and the purpose for which they were to be used. Each group had training squadrons to the west of it. On 2 September 1939 however, No. 1 Group, the largest, comprising approximately 160 aircraft, was transferred to **France**, leaving only just over 350 aircraft available for operations from bases in the United Kingdom. But even this small force could not be maintained at a high rate of serviceability, while the size and surface of many of its airfields were not suitable for the aircraft they had to accommodate. In fact, during the first winter of the war, many of the grass aerodromes could not be used at all for considerable periods. Altogether throughout the first two years of its operations, problems of supply, both of aircraft and aerodromes and their equipment, and of men to service and maintain them, were seriously to affect the efficiency of Bomber Command.

In August 1939 **Coastal Command**, with an operational strength of fewer than 180 aircraft, was in an even less enviable position since it was called upon to operate with maximum intensity from the outbreak of hostilities. Its aircraft were distributed among 16

¹ Thus during the early period of the war the term 'heavy bomber' was used to describe Wellington, Whitley, and Hampden aircraft. Later, with the introduction of four-engined bombers, the former aircraft were classified as 'medium bombers'.

squadrons organised in three groups on a geographical basis. Their headquarters were situated, along with those of the **Royal Navy**, in Area Combined Headquarters at **Plymouth**, Chatham and Rosyth. ¹ The main strength of the Command lay in its nine squadrons of Ansons, versatile and reliable aircraft, but limited in range and performance. Only one squadron had new American-built Hudsons, and only one squadron, equipped with the Vildebeeste—an aircraft which rather belied its name—could carry torpedoes. Furthermore the flying boat situation was serious since only two squadrons had Sunderlands, the remainder being equipped with an assortment of seaplanes of indifferent performance. The role assigned to the Command in the event of war was a strenuous one and this meagre collection of aircraft was scarcely equal to the many tasks entrusted to it. ² In fact it soon became necessary to enlist the aid of training aircraft and, during the autumn months of 1939, when the enemy's submarine campaign began to cause considerable alarm, 'scarecrow' patrols were flown by Tiger Moths. These training aircraft were quite unarmed and carried no bombs. On sighting an enemy submarine they carried out a mock attack, hoping thereby to force the vessel to submerge and so restrict its activities.

Altogether, on the outbreak of war, the **Royal Air Force** numbered in its first-line strength barely 1800 aircraft, including 400 overseas, and many of these were obsolescent types. The German **Luftwaffe**, on the other hand, possessed some 4160 machines, almost all of modern design with speeds and performance at least equal to similar types in **Britain**. ³ Its main strength lay in bomber aircraft specially designed for close support of ground forces, together with a large number of transport planes which were to be employed for the same purpose. The Germans also had a considerable force of fighter aircraft, but these too were

mainly designed to provide protection for bomber formations in short-range operations

¹ Later, in October 1940, when the U-boat threat in the Western Approaches began to assume serious proportions, a fourth Area Combined Headquarters was established at Liverpool. This system of operational control, fixed in 1938, provided a working arrangement for the co-ordination of the air effort of **Coastal Command** with that of the **Royal Navy**. Liaison officers were stationed at the Admiralty and at Coastal Command Headquarters in **London**, while at the Area Combined Headquarters the local naval staffs shared an operations room with the air staffs of the **Coastal Command** Group. Once initial difficulties had been overcome, this organisation worked well and contributed largely to the successful conduct of operations in the Battle of the **Atlantic**.

² In the final war plans **Coastal Command** had been given the following tasks:

- (Assistance to the Home Fleet in the detection and prevention a) of enemy vessels escaping from the North Sea to the **Atlantic**.
- (Provision of anti-submarine patrols.
b)
- (Air searches over home waters to afford reconnaissance for
c) the Home Fleet.
- (Provision of an air striking force for attacks on enemy
d) warships.

³ Details of the principal British and German operational aircraft are given in **Appendix IV**.

ahead of the ground forces. In fact, long-range aircraft were not developed by the Germans to any extent because of their avowed intention of winning the war by a series of lightning strokes carried out by their air and ground forces working in close collaboration. However, judged by the standards of that time, the German Air Force was a powerful and efficient weapon. In the immediate pre-war years it had

found opportunities to test the performance of its aircraft and to discover and remedy defects. The extensive *Lufthansa* service,¹ army manoeuvres, air displays and international competitions all served this purpose well. Finally, the Spanish Civil War gave the **Luftwaffe** the chance of testing its new machines under actual war conditions, when useful experience was gained and valuable lessons learned. Their application was to follow swiftly in the overwhelming of a large part of **Europe** after a few months of the war.

The Royal Air Force, on the other hand, was only at the beginning of its expansion and lacked much of this experience. Nevertheless it was splendidly trained and designed for operational employment in accordance with a sound strategic doctrine. In 1940 it was just strong enough to hold the fort against the **Luftwaffe** and then, in the following years, to push it back and keep it back from the heart of the Empire's war effort. Eventually, gathering strength and stretching its wings over land and sea in company with powerful allies, it made possible those naval and military operations which brought about the complete collapse of the enemy.

The men who served with the **Royal Air Force** came from every corner of the world. They were the pick of their nations' young manhood—a gallant company who made courage and devotion the rule rather than the exception. While life in the air service had its trials and was commonly short, few would have changed their lot. The wide fields of the air were their battleground where speed and movement gave exhilaration and a sense of high adventure. Yet their work involved oft-repeated periods of intense strain when every moment might bring some fresh trial of quickness of brain or steadiness of nerve. And if to the onlooker they often appeared casual, it should be remembered that this was but a cloak to hide their true feelings—a protective shell which fortified an inward resolution. These men who fought in the air overcame more than their enemies. They and those who worked for them on the ground grappled successfully with many technical problems



EUROPE

¹ The *Deutsche Lufthansa* was a heavily government-subsidised company which controlled all German airlines with the exception of one operating to **Russia**. It was formed in 1926, and although its aircraft were 'civilian', they were designed with a view to rapid conversion for military purposes.

and perfected a vast array of scientific devices which had a decisive influence on the war in the air. By their valour and steadfast devotion to duty they added lustre to the tradition of their service— a tradition which had been fashioned and welded in the First World War and in the years between. This they did in the storm of anti-aircraft fire, in the flash of combat and in long flight over the desert, the tropic jungle, and the lonely wastes of the sea.

* * * * *

Airmen from the Dominion of New Zealand were associated with the **Royal Air Force** from its inception in 1918. Even before that time New Zealanders were flying with the squadrons of the Royal Flying Corps and the **Royal Naval Air Service**, sharing their hardships and difficulties in flying comparatively primitive machines. During the First World War 500 New Zealanders saw service in one or other of these units. On the cessation of hostilities in November 1918, the majority of these men

returned to their own country, but a few remained in England to continue service with the **Royal Air Force** and several achieved further distinction before the Second World War began. In this respect the careers of Carr, Coningham and Park are of particular interest.

Air Marshal Sir Roderick Carr ¹ had left New Zealand in 1914 as a trooper with 6 Squadron of the Wellington Mounted Rifles. But he was keen to fly and a year later joined the Royal Naval Air Service, with which he saw three years of active operations over **France**. Then he transferred to the **Royal Air Force** and in 1919 went with a squadron to **Russia**, winning the Distinguished Flying Cross for his services there. In 1921, he joined Shackleton's last expedition to the Antarctic as pilot of the plane carried by the *Quest*. On his return to England he rejoined the **RAF** and for the next few years served with various units in the **United Kingdom**. In May 1927 Carr set a world record for the longest non-stop flight by flying a Hawker Horsley service biplane from Cranwell in Lincolnshire to the Persian Gulf—a distance of 3400 miles—in just under 35 hours. After commanding a bomber squadron in England for a short period, he went to the **Middle East** until 1934, then returned to serve as Senior Air Officer in HMS *Eagle*, one of the

¹ Air Marshal Sir Roderick Carr, KBE, CB, DFC, AFC, Orders of St. Stanislas and St. Anne (Rus), Croix de Guerre (Fr); **RAF** (retd); England; born NZ 31 Aug 1891; **1 NZEF**, 1914; transferred **RNAS** 1915 and **RAF** 1918; permanent commission **RAF** 1926; served in **France**, 1939–40, with Advanced Air Striking Force; AOC Northern Ireland, 1940–41; AOC No. 4 Group, Bomber Command, 1941–44; DCAS, Supreme HQ, **Allied Expeditionary Force**, 1945; AOC Base Air Forces, SE Asia, 1945; AOC-in-C, **India**, 1946.

first aircraft carriers. Command of a Flying Training School in England followed until war began, when he was sent to **France** in charge of a section of the Advanced Air Striking Force. He was later appointed Air Officer Commanding No. 4 Group, Bomber Command, a post he was to hold for the greater part of the war.

Air Marshal Sir Arthur Coningham,¹ although born in Brisbane, was educated in Wellington and wished to be known as a New Zealander. He was, in fact, very proud of his nickname 'Maori' which somehow became corrupted to 'Mary'. Two days after the outbreak of war in 1914, Coningham enlisted in the Canterbury Mounted Rifles, but after service in the Middle East was invalided home in 1916 with typhoid. On regaining his health he travelled to England at his own expense and within a week of his arrival had entered the Royal Flying Corps. Following a short period of training he joined a squadron in France, and before being wounded in July 1917 had gained the Military Cross and the Distinguished Service Order for his exploits as a fighter pilot. On his recovery Coningham returned to France as a squadron commander and won the Distinguished Flying Cross. In 1919 he was appointed to a permanent commission in the RAF, and after serving for four years on home establishments, went to Iraq to command a squadron engaged in restoring and maintaining order in this newly mandated territory. Later, while on staff duties in Egypt, he blazed the trail for the ferry route across Africa which was afterwards used for supplying aircraft to the Middle East and India. This was in October 1925 when, in command of a flight of three De Havillands, Coningham made the double journey from Cairo to Kano, in Nigeria. He was awarded the Air Force Cross in the following year and returned to England to serve at the Royal Air Force College, Cranwell, and the Central Flying School before being posted to Khartoum in 1932. Three years later he was back in England at Coastal Area Head- quarters, and was one of the first staff officers in Coastal Command on its formation in 1936. A few months before the Second World War began Coningham was appointed Air Officer Commanding No. 4 Group, Bomber Command. He was later to return to the Middle East and play an outstanding part in the conduct of air operations in that theatre; subsequently he was to command the Second Tactical Air Force in Europe.

¹ Air Marshal Sir Arthur Coningham, KCB, KBE, DSO, MC, DFC, AFC, Legion of Honour (Fr), Distinguished Service Medal (US),

Order of Leopold (Bel), Croix de Guerre with Palm (Bel); born **Brisbane**, 19 Jan 1895; **1 NZEF**, 1914–16; entered RFC 1916; permanent commission **RAF** 1919; AOC No. 4 Group, Bomber Command, 1939–41; AOC Western Desert, 1941–43; AOC 1st TAF, North Africa, **Sicily, Italy**, 1943–44; AOC-in-C 2nd TAF, invasion of NW Europe and **Germany**, 1944–45; lost when air liner crashed during **Atlantic** crossing, Jan 1948.

Air Chief Marshal Sir Keith Park ¹ showed a taste for adventure early in life by going to sea in one of the vessels of the Union Steamship Company. Then, early in August 1914, he enlisted in the New Zealand Field Artillery and saw active service as a bombardier in Egypt. He also took part in the original landing at **Gallipoli** and remained on the Peninsula until the final evacuation. He then served for some time in **France**, through the first Battle of the **Somme**, until he was wounded a second time, invalided to England, and declared fit for home service only. Undaunted, Park joined the **Royal Flying Corps** and returned as a fighter pilot to **France**, where deeds of outstanding gallantry during 1917 won him the Military Cross and bar. He had ‘accounted for nine enemy aircraft, three of which were completely destroyed and six driven down out of control’. Sir Keith was himself shot down twice, once by anti-aircraft fire and once in combat, but he continued flying and the last months of the war saw him commanding the squadron in which he had already served both as a pilot and as flight commander. By this time his battle honours had been increased by the awards of the Distinguished Flying Cross and the French Croix de Guerre. He had also been mentioned in despatches. In the years which followed he saw service in **Iraq** and Egypt, returning to England in 1926 to command first a fighter squadron and then the fighter station at Northolt, during which time he organised the flying programmes for the air pageants at Hendon in 1929 and 1930. Shortly afterwards he became Commanding Officer of the Oxford University Air Squadron for two years and received the unusual distinction of the honorary degree of Master of Arts for his services. After a term as Air Attaché at Buenos Aires Park returned to England, and the outbreak of the Second World War found him serving

as Chief of Staff to Lord Dowding, ² who was AOC-in-C Fighter Command. Then began a second period of distinguished war service, the highlights of which were to be his command of No. 11 Fighter Group during the Battle of **Britain**, and his brilliant conduct of air operations from **Malta** during 1942.

¹ Air Chief Marshal Sir Keith R. Park, GCB, KBE, MC and bar, DFC, Croix de Guerre (Fr), Legion of Merit (US); **RAF** (retd); **Auckland**; born **Thames**, 15 Jun 1892; in First World War served **Egypt**, **Gallipoli** and **France** with NZ Field Artillery, 1914–15, and Royal Field Artillery, 1915–16; seconded RFC 1917; permanent commission **RAF** 1919; SASO, HQ Fighter Command, 1938–40; commanded No. 11 Fighter Group during Battle of **Britain**; AOC No. 23 Training Group, 1941; AOC RAF Egypt, 1942; AOC RAF Malta, 1942–43; AOC-in-C **Middle East**, 1944–45; Allied Air C-in-C SE Asia, 1945–46.

² Air Chief Marshal Lord Dowding, GCB, GCVO, CMG; **RAF** (retd); **England**; born Moffat, Dumfries, 24 Apr 1882; joined **Royal Artillery** 1898; RFC 1914; seconded **RAF** 1918; permanent commission **RAF** 1919; AOC-in-C Fighter Command, 1936–40; on special duty (under Minister of Aircraft Production) in **USA**, 1940–41; Principal Air ADC to HM the King, 1937–43; retired Jul 1942.

Among other New Zealanders who remained with the Royal Air Force between the wars were Air Vice-Marshal MacLean, ¹ Maynard, ² and Russell. ³ MacLean, after distinguished service with the Royal Fusiliers and the **Royal Flying Corps** during the First World War, which included command of a wing in **France**, served with the **RAF** in **India** and then in the **Middle East**, where he was in charge of air bases in **Iraq**, **Egypt**, and at **Aden**. Shortly before the outbreak of the Second World War he was appointed AOC No. 2 Group, Bomber Command. Maynard, who had begun his flying career in 1915 with the **Royal Naval Air Service**, flew with units in **Britain**, in the **Middle East** and **Iraq** before returning to command the University of London Air Squadron in 1935. In January 1940 he was appointed from **Air Ministry** to **Malta**, where as Air Officer

Commanding he achieved notable success in organising the air defence of the island in the initial stages, when few people had any faith that **Malta** could hold out against sustained attack. Russell had joined the **Royal Flying Corps** in 1915 and won distinction in **France** before being taken prisoner in the following year. Between the wars he served in the **United Kingdom** and in **Iraq**, and then commanded the squadron stationed at **Aden**. Subsequently he served with Fighter Command in **Britain** and as Air Officer Commanding a group in the **Middle East**.

Such men were the pioneers of the Dominion's contribution to the work of the **Royal Air Force**, a contribution which was to grow in strength during the years between the wars until, by 1939, there were several hundred New Zealanders serving among its units. Aviation in New Zealand had developed slowly and because of this, from the early twenties, individuals and small groups of young men who were eager to fly had begun to make their way to England to join the **RAF**. Some paid their passages, others worked their way as deck hands, as stewards, as ships' writers and even in the stokehold. On their arrival in England many were accepted for service immediately but others, for various reasons, had to wait months before they could satisfy the high standard required. Very

¹ Air Vice-Marshal C. T. MacLean, CB, DSO, MC, Legion of Honour (Fr); England; born **Greymouth**, 18 Oct 1886; served with Royal Fusiliers, 1914–15; seconded RFC 1915; permanent commission **RAF** 1919; AOC No. 2 Bomber Group, 1938–40; AOC No. 23 Training Group, 1940; retired Dec 1940.

² Air Vice-Marshal F. H. M. Maynard, CB, AFC, Legion of Merit (US); England; born **Waiuku**, 1 May 1893; served with RN Divisional Engineers, 1914–15; transferred RNAS 1915; **RAF** 1918; permanent commission **RAF** 1919; AOC **RAF, Mediterranean**, 1940–41; Air Officer in Charge of Administration, **Coastal Command**, 1941–44; AOC No. 19 Group, **Coastal Command**, 1944–45.

³ Air Vice-Marshal H. B. Russell, CB, DFC, AFC; **RAF**; born Hastings, 6 May 1895; commissioned Royal Field Artillery, 1914; seconded RFC 1915 and **RAF** 1918; permanent commission **RAF** 1919; SASO, No. 21 Training Group, 1939–40; SASO, No. 2 **RAF** Component, **France**, 1940; served with Fighter Command, 1940–41; AOC No. 215 Group, **Middle East**, 1942–43; AOC No. 70 Group, **United Kingdom**, 1943–45; Air Officer i/c Administration HQ FTC, 1946–49.

few accepted the first or even a second refusal. Rather than return to New Zealand they took odd jobs or eked out their savings until they could appear successfully before a selection board. Several who eventually found they could not be accepted as aircrew joined for training in ground duties. One youth who had made his own way to England at the age of 17, worked as a labourer on a farm and then as a handyman in a **London** hotel while pressing his application for entry into the **RAF**. He subsequently became an outstanding bomber pilot and navigator, winning the Distinguished Service Order as well as the Distinguished Flying Cross and bar.

During the years which followed many of these men served in remote parts of the world where air power, because of its mobility, was proving invaluable in keeping the peace. In Egypt, Palestine, **Iraq** and in the Aden Protectorate, they became painfully familiar with scorching heat and blinding sandstorms as they successfully carried out the policy of ‘control without occupation’, which was economical in both manpower and equipment. This was particularly the case on the north-west frontier of **India**, where the warlike tribes who inhabited the wildest of country had always been difficult to control.

One of those who served in this region was Air Vice-Marshal McKee.¹ He had joined the **Royal Air Force** in 1926 and, after training in Egypt, spent five years in **India** with his squadron, mainly on the North-West Frontier during the time of the Afghanistan rebellion and the Waziristan rising. Afterwards he flew as a test pilot in Lahore and finally as commander of a communications flight at **Delhi**, before returning to

England as an instructor. After being mentioned in despatches in 1931, McKee was awarded the Air Force Cross in 1939 for his services during this period. Air Commodores Barnett ² and McGregor ³ were among those who served

¹ Air Vice-Marshal A. McKee, CB, CBE, DSO, DFC, AFC; **RAF**; born **Oxford**, Canterbury, 10 Jan 1902; joined **RAF** 1926; permanent commission 1936; commanded No. 9 Sqdn 1940; Wing Commander, Training, No. 3 Bomber Group, 1941; commanded RAF Station, Marham, 1941–42; RAF Station, Downham Market, 1942–43; Base Commander, Mildenhall, 1943–45; AOC No. 205 Group, **Italy**, 1945; SASO HQ Mediterranean and **Middle East**, 1946–47; Commandant RAF Flying College, Manby, 1949–51; AOC No. 21 Group, **Flying Training Command**, 1951–.

² Air Commodore D. H. F. Barnett, CBE, DFC; **RAF**; born Dunedin, 11 Feb 1906; Cambridge University Air Squadron 1926–29; permanent commission **RAF** 1929; commanded No. 40 Sqdn 1940; RAF Station, Swanton Morley, 1942–43; Air Staff Strategic Bombing duties, Bomber Command, 1944; SASO (Org), Bomber Command, 1945; commanded Air HQ, Mauripur, **India**, 1947; Director of Operations, Air Ministry, 1949–.

³ Air Commodore H. D. McGregor, CBE, DSO, Legion of Merit (US); **RAF**; born Wairoa, 15 Feb 1910; joined **RAF** 1928; permanent commission 1932; commanded Nos. 33 and 213 Squadrons, 1939–40; RAF Station, Ballyhalbert, 1941; RAF Station, Tangmere, 1942–43; Group Captain, Operations, **Mediterranean Air Command**, 1943–44; Allied Deputy Director of Operations, Intelligence Plans, North Africa and **Italy**, 1944; AOC Levant, 1945–46; Planning Staff, North Atlantic Treaty Organisation, **Washington**, 1949–50; AOC 2nd **Tactical Air Force**, **Germany**.

in the **Middle East**. Barnett, who had joined the **Cambridge University Air Squadron** in 1926 and been granted a permanent commission in the **Royal Air Force** three years later, commanded a bomber squadron at Shaibah in **Iraq**. During the disturbances in

Palestine in the late thirties McGregor led the only fighter squadron there at the time. It was equipped with Gladiators, and small detachments stationed at strategic points had the difficult task of assisting the ground forces to round up the armed bands of tribesmen who were roaming the countryside destroying property and communications. As these marauders left their villages on the approach of army units, it was only the unexpected arrival of aircraft, usually at dawn, that enabled them to be trapped. Messages would be dropped to the encircled village or area telling the inhabitants that they would be unharmed so long as they did not try to get out of the ring before the ground forces arrived to search and investigate. So successful were these tactics that order was completely restored in Palestine by the middle of 1939. For his fine leadership in these operations, McGregor was awarded the DSO.

Somewhat different were the experiences of Wing Commander A. H. Marsack, ¹ who was employed as an Intelligence officer in the Aden Protectorate during the late thirties. In the course of his duties he was often called upon to investigate incidents with the local tribal chiefs, but by exercising initiative and tact he was usually successful in bringing about a peaceful solution to the difficult problems that arose. On one occasion, however, when a certain tribe defied government orders, he organised air action and, after being under fire from the rebels for two days, eventually effected the occupation of their village with a small band of irregulars. He was awarded the MBE in June 1938, and a few months later was mentioned in despatches for further work in this region. His brother, Group Captain D. H. Marsack, ² who was engaged on similar duties in Palestine about the same time, was mentioned in despatches in 1937. Both continued to do valuable work as Intelligence officers in the [Middle East](#) in the years which followed.

Others who saw early service with the [Royal Air Force](#) returned to New Zealand to assist in the building up of the Dominion's own

¹ Wing Commander A. H. Marsack, MBE; born Parnell,

Auckland, 6 Oct 1906; joined **RAF** 1930; permanent commission 1936; Special Intelligence, **Middle East**, 1939–44.

² Group Captain D. H. Marsack; born Parnell, **Auckland**, 26 Feb 1909; joined **RAF** 1930; permanent commission 1936; Intell and Admin duties, **Middle East**, 1939–45.

air force. Air Commodore Findlay, ¹ who had flown with the Royal Flying Corps and then with the **Royal Air Force**, and Air Commodore Wallingford, ² who had also been with the **RAF** in the First World War, were among the first officers appointed on the creation of the New Zealand Air Force. In 1938 Findlay went back to England to command a coastal squadron and in the same year Wallingford was appointed New Zealand Air Liaison Officer in **London**. Air Commodore Olson ³ joined the **Royal Air Force** in 1926, served with a squadron in Egypt and on the North-West Frontier, then returned to New Zealand to become an instructor at **Wigram**. Air Commodore Kay, ⁴ who had enlisted in the **Royal Air Force** about the same time, specialised in meteorology and navigation and then became an instructor in New Zealand. However, before returning to the New Zealand Air Force, he flew from England to **Australia** in 1930, took part in the Melbourne Centenary race four years later, and afterwards flew the **Tasman Sea**. Subsequently both Kay and Olson were to serve with and command No. 75 New Zealand Squadron during the war. Kay, in fact, was one of the original members of the unit. This coming and going between **Britain** and New Zealand continued on a small scale throughout the early thirties and eventually led to the development of a regular system of interchange of officers, particularly in the technical branches.

During the period of increased technical development in **Britain** before the war, several New Zealanders were among those who won distinction as test pilots. Flight Lieutenant Piper, ⁵ who joined Short Bros. in 1934, continued in this work and subsequently became chief test pilot. By the end of the war he had flown and tested 77 different types of machines, including the Mayo composite aircraft, the original

splitting tests of which were carried out in 1938. It

¹ Air Commodore J. L. Findlay, CBE, MC, Legion of Honour (Fr), Legion of Merit (US); **RNZAF**; born **Wellington**, 6 Oct 1895; served East Surrey Regiment, 1914–16; served in RFC and **RAF**; joined NZ Air Force, 1923; commanded No. 48 Sqdn, 1938–40; **RAF Station**, Hooton Park, 1940–41; SASO, Air Department, 1941; AOC Central Group, 1942–43; Head of NZ Joint Staff Mission, **Washington**, 1943–.

² Air Commodore S. Wallingford, CB, CBE, Legion of Merit (US); **Wellington**; born Hythe, **Kent**, 12 Jul 1898; served Rifle Brigade and **RAF** 1916–20; NZ Air Force, 1922–24; **RAF** 1924–29; NZPAF 1929–36; NZ Liaison Officer, **London**, 1938–40; Air Force Member for Personnel, 1941–42; AOC No. 1 (Islands) Group, 1943–44; Air Force Member for Supply, 1944–46; Air Force Member for Personnel, 1948–52.

³ Air Commodore E. G. Olson, DSO; born **New Plymouth**, 27 Feb 1906; joined **RAF** 1926; appointed **RNZAF** 1935; commanded No. 75 (NZ) Sqdn, 1942; commanded **RAF Station**, Oakington, 1942–43; AOC **RNZAF HQ**, **London**, 1944–45; died 15 May 1945.

⁴ Air Commodore, C. E. Kay, CBE, DFC; **RNZAF**; **London**; born **Auckland**, 25 Jun 1902; entered **RAF** 1926; appointed **RNZAF** 1935; commanded No. 75 (NZ) Sqdn, 1940–41; Air Staff, No. 8 Bomber Group, 1942; commanded **RNZAF Station**, **New Plymouth**, 1943; **Ohakea**, 1943–44; **Wigram**, 1944–45; Air Force Member for Supply, 1947–51; AOC **RNZAF HQ**, **London**, 1951–.

⁵ Flight Lieutenant H. L. Piper; England; born Duvauchelle, **Akaroa**, 2 Apr 1899; served **RAF** 1927–33; test pilot Short Bros., 1934; Short and Harland Ltd., 1938–46; chief test pilot 1946–48.

was a unique type of flying, this business of taking into the air a machine which had never been flown before. It demanded certain rare qualities, the chances of ultimate survival were slender and, like all other test pilots, Piper had many narrow escapes. Before joining Short

Bros. he had served with the [Royal Air Force](#) on a short-service commission which he obtained in 1927, and it was during this period that he made the notable flight to [Australia](#) with Kay, then a flying officer, as his co-pilot and navigator. Their machine, a Desoutter monoplane, was purchased with money obtained from the sale of Piper's farm in New Zealand. Petrol supplies had to be organised before the flight started as there was then no comfortable chain of prepared airfields. Eventually, on 9 February 1930, they set off and after many adventures, which included forced landings in the desert and on the beach near [Akyab](#), in [Burma](#), they reached [Sydney](#) on 3 April.

Group Captain A. E. Clouston, ¹ after obtaining a short-service commission in 1930, first served as a fighter pilot, winning renown for his skill in aerobatics, which were a feature of the air displays in England at that time. Then in 1935 he accepted a post as a test pilot at [Farnborough](#), where he carried out tests on new aircraft and the devices that were being fitted to them. He also flew aircraft in ice-forming conditions, on many occasions with his machine completely iced up. 'He has continued to fly,' says an official report, 'with three to four inches of ice piled high on the front of the windscreen, with large chunks of ice coming through the engine nacelle and striking the fuselage, and has generally carried the experiments to the limits under which he could retain any sort of control over the aircraft'. By accepting the high risks involved in these test flights he furnished valuable data for the scientists, as also did his later work which led to the standardisation of the balloon cable. This involved flying into a cable in an aircraft specially fitted with a steel-netted cockpit to protect the pilot from the wire which was frequently lashed round the aircraft by the propeller. In 1936 Clouston turned his attention to long-distance flying and air races. His many exploits during the next few years included remarkable and record-breaking flights to [Cape Town](#), [Sydney](#), and New Zealand. ² At the beginning of the war he was recalled from the Reserve to continue his work as a test pilot and

¹ Group Captain A. E. Clouston, DSO, DFC, AFC and bar; **RAF**; born **Motueka**, 7 Apr 1908; joined **RAF** 1930; test pilot, Experimental Section, Royal Aircraft Establishment, 1939–40; served with Directorate of Armament Development, MAP, 1940–41; commanded No. 1422 Flight, 1941–43; No. 224 Sqdn, 1943–44; **RAF** Station, Langham, 1944–45; BAFO Communication Wing, 1945–47; RNZAF Station, **Ohakea**, 1947–49; RAF Station, Leeming, 1950; Commandant Empire Test Pilots' School, 1950–.

² The flight to New Zealand was made in March 1938, in a De Havilland Comet, the time taken being 4 days 8 hours.

was later closely connected with experimental work on the Turbinlite searchlight as an aid to the interception of enemy night raiders. His work was recognised by the award of the Air Force Cross in 1938 and a bar to this decoration in 1942. He afterwards served with distinction in **Coastal Command**.

Group Captain Isherwood ¹ was also engaged in the testing of new aircraft during the pre-war years. He had joined the Royal **Air Force** in 1930 and, after training in Egypt, served for four years on the North-West Frontier and then with a fighter squadron in **Eritrea** before returning to England in 1936. Early in that year he joined the staff of the experimental station at Martlesham Heath in Suffolk, where he later commanded one of the flights of the performance testing section. This section carried out the development flights of the Hurricane, Spitfire, Beaufighter and Typhoon, fighter aircraft that afterwards proved so successful in operations against the enemy. In the King's Birthday honours for 1940 Isherwood received the Air Force Cross. He was later to lead a fighter wing in Northern Russia and serve with distinction in South-East Asia.

Another New Zealander who flew as a test pilot in the early thirties was Wing Commander Moir, ² who had joined the **RAF** in 1926. Before taking up experimental flying he had served with a bomber squadron and then as an instructor at the Central Flying School. Group Captains

Grindell ³ and Gordon, ⁴ both of whom entered the **RAF** in the early nineteen-thirties, and Wing Commander Hooper ⁵ were among those who did valuable work as flying instructors during the period of expansion before the war.

¹ Group Captain H. N. G. Isherwood, DFC, AFC, Order of Lenin (**USSR**); born **Petone**, 13 Jul 1905; served with NZ Mounted Rifles, 1924–30; joined **RAF** 1930; permanent commission 1936; flying duties, Aeronautical and Armament Experimental Establishment, 1936–41; Sector Commander, No. 9 Fighter Group, 1941; Controller, HQ No. 9 Fighter Group, 1941; commanded No. 151 Hurricane Wing in **Russia**, 1941; commanded RAF Stations, Church Stanton, Valley and Woodvale, 1942–44; RAF Station, Mauripur, **India**, 1944–45; commanded No. 342 Wing, SE Asia, 1945; killed in aircraft accident, 24 Apr 1950.

² Wing Commander J. F. Moir, AFC and bar; born **Christchurch**, 13 Aug 1902; served **RAF** 1926–35; recalled Sep 1939; commanded No. 8 EFTS, 1939–41; No. 10 Flying Instructors' School, 1941–45.

³ Group Captain G. J. Grindell, DFC, AFC and bar; born Geraldine, 20 Aug 1910; joined **RAF** 1932; permanent commission 1938; flying duties, No. 5 FTS, 1939–40; Air Staff, HQ **Flying Training Command**, 1940–42; commanded No. 487 (NZ) Sqdn, 1942–43; RAF Station, Fiskerton, 1943–44; SASO, RAF Mission to **Australia** and New Zealand, 1944–46.

⁴ Group Captain D. McC. Gordon, OBE, AFC; born Waverley, Patea, 7 Apr 1905; joined **RAF** 1930; permanent commission 1936; CFI, No. 7 FTS, 1938–40; commanded an Initial Training School, **Canada**, 1940–41; control duties, HQ No. 18 Group, 1941–42; commanded No. 119 Sqdn, 1942–43; RAF Stations, Invergordon, Castle Archdale and Lagens, Azores, 1943–46.

⁵ Wing Commander W. E. Hooper, AFC; born Pihama, Waimate Plains, 17 Jul 1906; served **RAF** 1930–37; recalled Sep

1939; CFI, No. 8 EFTS, 1940–41; commanded No. 26 EFTS, 1941–45; No. 25 (Pilot) EFTS, 1945; killed in civil flying accident, Oct 1950.

Gordon had previously flown with one of the pioneer flying boat squadrons, while Grindell had served with a fighter squadron at **Aden** and Hooper with a bomber squadron in **Iraq** before being posted to instructional duties.

In the pre-war years several New Zealanders engaged in civil flying after a period of early service with the **Royal Air Force**. Wing Commander Stead ¹ started the **Stockholm** service for British Continental Airways while Captain Glover, ² who had worked his passage to England in 1930 to serve with the **RAF**, later joined Imperial Airways and was one of the original pilots on the **Durban** and **Singapore** routes. Both these men rejoined the Royal Air Force in 1940 to fly Sunderlands. Stead was posted in turn to the Shetlands, **Iceland**, the **Mediterranean** and **West Africa**, before becoming chief instructor at the flying boat training centre in **Scotland**. Glover flew with a squadron in the **Mediterranean** and later returned to British Overseas Airways to fly on the 'Horseshoe' route from **Durban** to **Calcutta**, **Cairo**, Lagos, Mombasa and Mada-gascar. Two other pilots eventually found their way to the **Pacific**. Captain Burgess, ³ after serving with the **Royal Air Force** for five years, joined Imperial Airways and in 1937 made the Australian and New Zealand survey flight in the flying boat *Centaurus*. He subsequently became chief pilot for Tasman Empire Airways. Captain Craig ⁴ was with the **Royal Air Force** in the **United Kingdom** and **India** until he joined Imperial Airways in 1937. Subsequently he transferred to Tasman Empire Airways, and in 1941 was attached to the **RNZAF** to command the first New Zealand flying boat squadron in the **Pacific**.

During the early thirties the number of men making their own way to **Britain** had increased considerably until, by the end of 1935, approximately a hundred New Zealanders were serving with the **Royal Air Force**, most of them as pilots. Several youths had also reached Halton

under an apprentice scheme, while a few fortunate ones were nominated as cadets to the RAF College at Cranwell. Then, in 1936, at the request of the British Government, a start was made with the selection in New Zealand of candidates to serve

¹ Wing Commander G. G. Stead, DFC; England; born Hastings, 8 Sep 1911; served **RAF** 1930–34; recalled **RAF** 1940; flying duties No. 204 Sqdn, 1940–41; CFI, No. 4 OTU, **Coastal Command**, 1942; on loan to **RNZAF**, 1942–43; seconded BOAC, 1943–45; appointed Senior Captain BOAC 1945.

² Squadron Leader H. L. M. Glover; England; born Dunedin, 2 Feb 1907; served **RAF** 1930–37; recalled **RAF** Nov 1940; released for duty with BOAC, 1942; appointed Senior Captain BOAC, 1943.

³ Captain J. W. Burgess; born Dunedin, 15 Aug 1908; served **RAF** 1931–35; chief pilot Tasman Empire Airways, 1939–43; served with BOAC as Senior Captain, 1943–51.

⁴ Captain W. J. Craig; England; born **Wanganui**, 25 Jun 1910; served **RAF** 1932–37; joined Imperial Airways 1937; later transferred BOAC; seconded Tasman Empire Airways 1939; attached **RNZAF** 1941; appointed Senior Captain BOAC, 1942.

as pilots in the **Royal Air Force**. As soon as volunteers were accepted they went to England for training, the first group arriving in July 1937. Thereafter parties of from twelve to twenty sailed at approximately monthly intervals for the next two years, the total number sent being 241. Shortly afterwards this scheme was supplemented by another under which men were given their preliminary training as pilots in New Zealand and sent to the Royal **Air Force** as ‘trained cadets’. ¹ Training began at **Wigram** in June 1937, and the first seven pilots left for England in the following April. Altogether 133 men were sent to England under this arrangement, the last of them arriving early in 1940.

By that time a much larger training scheme had commenced. In April 1939, as a result of the visit of an Air Mission from the **United Kingdom**, New Zealand offered, in the event of war, to train a thousand pilots each year for the **Royal Air Force**. In the following month, however, at the request of the **United Kingdom**, this proposal was modified to the provision of 650 pilots and the same number of navigators and air gunners each year. In addition the Dominion also agreed to train maintenance personnel. This plan was put into operation in September 1939, but it was soon replaced by the Empire Air Training Scheme, based on the agreement signed in **Ottawa** during November of that year—one of the most inspired and fruitful decisions of the war. The large majority of New Zealand airmen who served with the **RAF** during the Second World War were, in fact, trained under this latter scheme.² But while those who went to **Britain** under the pre-war arrangements were members of the **Royal Air Force**, those who began their training later remained members of the Royal New Zealand Air Force and during their service overseas were regarded as ‘attached’ to the **RAF**. For all practical purposes, however, they were also members of the **Royal Air Force** since they were maintained, clothed, accommodated and paid equivalent rates of pay by the British Government.

The outbreak of war found New Zealand, along with other parts of the Empire, largely unprepared for full participation in the struggle. Nevertheless in the air the Dominion was able to make an immediate contribution since, by September 1939, there were already 550 New Zealanders serving in the **Royal Air Force**, the largest number from any part of the Commonwealth outside the **British Isles**. Many were still completing their training but approximately

¹ The pilots were enlisted into the **RAF** under a short-service commission scheme, and the **United Kingdom** paid the **New Zealand Government** £1550 for each pilot trained in the Dominion.

² Details of the origin and development of the Empire Air

Training Scheme are given in

200 were serving with operational units in the United Kingdom, with a few others scattered among the squadrons in the **Middle East**, in **India**, and in the **Far East**. While most of these men were engaged in flying duties as pilots, individuals were also to be found serving in almost every section of the **Royal Air Force**, as administrative and medical officers, in the technical and equipment branches and in other ground duties. This ubiquity was, in fact, to be a feature of the Dominion's participation throughout the war. ¹ At the same time, in addition to a small number of men engaged in training for maintenance duties and a few officers on interchange, there was in England a group of 20 New Zealanders who had been got together to fly home the first of 30 Wellington aircraft previously ordered by the **New Zealand Government**. When war came these men were placed at the disposal of the Royal Air Force. Shortly afterwards they formed the nucleus of No. 75 New Zealand Squadron, the first Commonwealth squadron to be formed in Bomber Command.

Thus, in the early difficult months, the Dominion was represented in the **Royal Air Force** by this band of pioneers. Barely half were to survive the war. Many, in fact, were either killed or made prisoners of war during the first year of the conflict, when British airmen faced heavy odds in the air battles over **Belgium** and **France**, in the Battle of **Britain**, and in the early bombing raids over **Germany**. Those who remained continued to give of their experience and render sterling service as leaders, as commanders of various units and as specialists in many fields. The contribution they began and the comradeship they established were to provide a fine example for those who came later.

The flow of men from the Dominion was to increase rapidly as the Empire Training Scheme began to bear fruit. By the end of 1943, in spite of a heavy commitment in the **Pacific**, New Zealand had sent 3400 aircrew direct to Great Britain and a further 4300 mainly through **Canada**. While the main contribution continued to be flying personnel, a significant number of New Zealanders were also trained in the Dominion

and **Canada** for various ground duties with the **Royal Air Force**, as fitters, armourers, wireless operators and radar mechanics. As the war progressed they became scattered throughout the various operational and maintenance units in **Britain**, the **Middle East**, and South-East Asia. But in a struggle where technical skill and scientific knowledge were of supreme importance

¹ From the outset New Zealand adopted a generous attitude with regard to the disposal of the men she trained and provided. Early in 1940 the Dominion Government informed **Britain** that 'they wished to emphasise that the formation of New Zealand squadrons was not desired where this may affect adversely the efficiency of the **Royal Air Force**, nor did they wish to restrict the posting of New Zealand personnel serving with either **Royal Air Force** or New Zealand Squadrons'.

in securing and maintaining air superiority, these men made a contribution which it is difficult to overestimate. Indeed without the patient and enduring effort of the ground crews, often working under conditions of extreme physical discomfort, the victories in the air would not have been won. The men who flew the machines they serviced would be the first to affirm this.

In the New Zealand contingent with the **Royal Air Force** there was to be a significant contribution from the Maori people, whose representatives flew in each of the principal theatres of war. Flying Officer Pohe, ¹ who arrived in May 1941, was the first Maori pilot to reach the **United Kingdom**. He was posted to a bomber squadron and had the distinction of being the first of his race to bomb **Germany**. He also dropped parachutists in the famous raid on Bruneval. Pohe failed to return from a mission to **Hanover** on the night of 22 September 1943, and was taken prisoner. He took part in the famous escape from Luft III towards the end of March 1944 and was one of the fifty Allied airmen who were afterwards shot by the Germans. Among Maori fighter pilots, Flight Lieutenant Wetere ² flew with distinction in Hurricanes and later in Typhoons. In two tours of operations he made many attacks against

German airfields, military installations, transport and shipping. Warrant Officer Wipiti ³ shared in the destruction of the first Japanese aircraft shot down over **Singapore** in December 1941. He later lost his life while flying with a New Zealand fighter squadron in **Britain**. In the Middle East Flight Lieutenant Bennett, ⁴ brother of Lieutenant-Colonel C. M. Bennett, DSO, commander of the **Maori Battalion** in 1942–43, served in the **Desert Air Force** and was also prominent in ground strafing attacks over **Italy**.

A small group of New Zealand girls was to serve with **Britain's** WAAF and with the **Air Transport Auxiliary**. Miss Trevor Hunter, who joined the Wellington Aero Club in 1931 at the age of 16 and qualified as a pilot shortly afterwards, was with the Air Transport Auxiliary in the **United Kingdom** for four years, flying new aircraft from the factories to the operational units. Miss Betty Black, one of the earliest New Zealand women pilots, who flew with the Southland Aero Club, also served with the **Air Transport Auxiliary** for a long period.

¹ Flying Officer P. P. Pohe; born **Wanganui**, 10 Dec 1914; farmer; joined **RNZAF** Sep 1940; prisoner of war 22 Sep 1943; shot after attempting to escape from Stalag Luft III, 25 Mar 1944.

² Flight Lieutenant J. H. Wetere, DFC; **Wellington**; born Hoe-o-Tainui, 16 Aug 1918; civil servant; joined **RNZAF** Nov 1940.

³ Warrant Officer B. S. Wipiti, DFM; born **New Plymouth**, 16 Jan 1922; refrigerator serviceman; joined **RNZAF** Jan 1941; killed on air operations, 3 Oct 1943.

⁴ Flight Lieutenant E. T. K. Bennett; **Dunedin**; born **Hastings**, 16 Mar 1920; labourer; joined **RNZAF** Mar 1941.

Administration of Dominion personnel with the **Royal Air Force** came largely under the **Air Ministry**, but at the beginning of 1938 New Zealand had established a liaison office in **London** which, in June 1942,

was expanded to an air headquarters under Air Commodore Isitt.¹ This organisation, besides dealing with the more personal problems of New Zealand airmen serving in **Britain**, acted as a useful link between the **Air Ministry** in **London** and Air Department in **Wellington**. Throughout the war the New Zealand High Commissioner in **London**, Mr. W. J. Jordan, and his staff were keenly interested in the activities of New Zealand airmen and their welfare. Frequent visits by Mr. Jordan to units in which New Zealanders were serving did much to maintain high morale.

Altogether just under 11,000 men from the Dominion saw service with the **RAF** in the Second World War, and although seven squadrons were identified with New Zealand, the large majority of these airmen—over 90 per cent—became scattered throughout units in the **United Kingdom** and in various parts of the world. Many saw service in the **Middle East**, in South-East Asia, in East and **West Africa**, as well as in **Canada** and South Africa. They won many honours but they also suffered heavy casualties. No fewer than 3290 lost their lives, while a further 580 became prisoners of war. In all, their service was such that the people of the Dominion could read with justifiable pride the Air Council's message at the end of hostilities paying tribute to 'the illustrious part which New Zealand airmen had played' and 'the honour they had brought to their country and to the **Royal Air Force** by their gallant service in all theatres of war'.

¹ Air Vice-Marshal Sir Leonard Isitt, KBE, Legion of Merit (US); **Wellington**; born **Christchurch**, 27 Jul 1891; NZ Rifle Brigade 1915–16; RFC and **RAF** 1916–19; joined NZPAF 1919; DCAS, **RNZAF**, 1943; CAS, **RNZAF**, 1943–46.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 2 – EARLY OPERATIONS FROM BRITAIN AND FRANCE

CHAPTER 2

Early Operations from Britain and France

WHEN war with **Germany** began on 3 September 1939, the **Royal Air Force** was in no position to undertake any large-scale offensive action, and for some time British policy was governed by the consideration that the less bombing there was the better. Considerable apprehension was felt about the effect of heavy air attacks on **London** and the fact that Bomber Command was far from being able to return blow for blow. Therefore, following President Roosevelt's appeal ¹ to the governments of **Europe**, **Britain** quickly responded with instructions to her armed forces prohibiting bombardment of anything except 'strictly military objectives'. Contrary to general expectation, however, the Germans had no intention of launching an immediate air assault against the British Isles. Instead, they poured out radio threats while they completed their conquest of **Poland**. **Hitler**, in fact, hoped to isolate the Polish 'incident' and to declare a temporary truce; early in October he actually made overtures for peace with the Western democracies. Thus, after the capitulation of **Poland**, there followed a period of inaction which was perplexing to many observers, and there was soon much talk of a 'phoney war'. This epithet was, however, hardly applicable to the war at sea, which was real and continuous from the outset. **Britain's** increasing dependence on seaborne supplies had not escaped the notice of the German naval commanders, not all of whom subscribed to the Nazi doctrine of a short war in which victory would be achieved by the superior power of the **Luftwaffe**. Recalling how the German Navy had brought **Britain** to the verge of defeat in 1917, they saw that if the northern exits of the North Sea were forced open and eventually controlled, a fruitful campaign might then be launched against British commerce in the **Atlantic**.

The early months of the war were, therefore, mainly concerned with the efforts of the **Royal Navy**, aided by slender air forces

¹ Roosevelt appealed to each of these governments' to affirm its determination that its armed forces shall in no event, and under no circumstances undertake bombardment from the air of civilian population or unfortified cities upon the understanding that the same rules of warfare shall be scrupulously observed by all their opponents'.

(principally those of **Coastal Command**), to restrict the operations of German U-boats and prevent surface raiders and major naval units escaping into the **Atlantic**. Meantime British fighter pilots and many of the bomber crews chafed at their inactivity. ¹ The coastal squadrons, on the other hand, were called upon from the outset to fly long hours on reconnaissance over the North Sea or on anti-submarine patrols and as escorts to shipping.

There were, by this time, some fifty New Zealanders scattered among the units of **Coastal Command**, and as soon as war began they were engaged upon one or other of these duties. No. 48 Squadron, whose Ansons escorted convoys and hunted U-boats in the Channel, held particular New Zealand interest. In 1918, as a fighter reconnaissance unit, it had been commanded by Sir Keith Park, then a major. Now, at the beginning of the Second World War, there were seven New Zealand pilots on its strength and it was once again commanded by a New Zealander, Wing Commander Findlay, whose service with the air arm dated from the days of the **Royal Flying Corps**. On 3 September 1939 No. 48 Squadron had commenced operations from an airfield near Portsmouth and a week or so later established an advanced base at the airport on Guernsey in the **Channel Islands**. Subsequently the squadron's Ansons assisted in the rescue work of the SS *Domala*, the first ship sunk in the Channel by enemy action. They were also early in combat with the enemy although at first the Anson, with its low speed and lack of armament, proved no match for the German aircraft encountered. However, after two machines had been lost because of these disadvantages, the squadron improvised two Lewis gun mountings in the cabin, with the guns firing through the windows to cover the blind spots

on either side. One of the original members of the unit records that 'the crew of the first aircraft so fitted collected an unsuspecting Hun'. This was typical of the expedients adopted by **RAF** crews in the early days to overcome the difficulties under which they operated.

The Avro Anson, originally a civil transport machine, was the mainstay of **Coastal Command** in the initial stages and most of the reconnaissance patrols, designed to prevent the escape of German raiders from the North Sea, were also flown by these aircraft. From bases on the east coast of **Scotland** a continuous

¹ 'The first week of the war we were expecting to be bombed at any moment', writes a fighter pilot. 'But no bombers came and soon the tension gave way to a feeling of unreality. Boredom soon followed'. In Bomber Command 'The days passed slowly. September petered away and brought the fogs of October. Flying training was often cancelled. We spent day after day in the crew room, sometimes listening to lectures. Occasionally some aircraft were wanted but they did not always go. Standing to. Standing by. Standing down. The days dragged by in the same dreary routine'.

line patrol was directed towards **Norway**, supplemented by searches at dawn and dusk to the north and south of this line. New Zealanders shared in these duties from the outset. On the third day of the war one of them, Pilot Officer Edwards,¹ was attacked by an enemy seaplane over the North Sea. His guns failed; the machine caught fire and crashed on the sea. The enemy pilot, keen to have confirmation of his victory, landed and picked Edwards up and he became the first British officer to be made prisoner of war. But the early air patrols were, on the whole, monotonous and unexciting, and as autumn deepened into winter the conditions under which the aircrew operated were often extremely arduous. Apart from having to fly in the stormy weather prevalent around the coasts of **Britain** at the close of the year, some of the squadrons were based at airfields that were either improvised or still under construction. Many were sited in bleak and remote spots where

the wind seemed perpetual and mud universal. Indeed, in almost every respect the early months of the air war at sea were a period of difficulties and trial during which experience in the technical side of air-sea warfare had to be painfully accumulated. Special radar equipment for the detection of enemy vessels was slow in appearing and both weapons and aircraft often proved disappointing in performance. In particular, the anti-submarine bombs carried were too few and too small to inflict serious damage.

The majority of aircraft carried only 100-pound bombs which were not lethal even if a direct hit was obtained while the U-boat was still on the surface. A British submarine which sustained a direct hit at the base of the conning tower from one of these bombs suffered no damage to its pressure hull. The 250-pound bomb carried by the flying boats was not much better as it had to detonate within six feet of the hull before inflicting serious harm. Owing to a rather uncertain fuse the minimum height of release was 600 feet to avoid damage to the aircraft, with the result that accuracy was a matter of luck. The only bomb-sight available required a steady run up to the target at an altitude in excess of 3000 feet, so was quite useless against such an elusive and momentary target as a quick-diving submarine. Furthermore, except in the Hudsons, there was no efficient distributor whereby a properly spaced stick of bombs could be dropped, which meant that they fell singly or in a ragged salvo. On most occasions the U-boat lookouts were able to give warning of the aircraft's approach so that their vessel was already beneath the surface before bombs could be released.

¹ Squadron Leader L. H. Edwards; **RNZAF**; **Wellington**; born **New Plymouth**, 22 Jun 1913; joined **RAF** May 1939; transferred **RNZAF** May 1944; p.w. 5 Sep 1939.

Fortunately the Germans started the war with a comparatively small fleet of U-boats, some fifty in number, of which only half were of the ocean-going type. Mechanical defects and the distance they had to travel from their German bases, made even longer by the harassing from

the air, rendered their operations against shipping during the first six months of the war more of an irritant than a real menace. ¹ Concentration for the Norwegian campaign produced a deceptive lull in their activities, and it was not until the second half of 1940 that intensified operations by both German U-boats and aircraft in the Western Approaches seriously threatened **Britain's** supply lines.

Thus, in the early months of the war the main interest was in northern waters. Here the maintenance of the regular reconnaissance patrols made heavy demands on both men and machines, yet in spite of difficulties experienced in keeping aircraft serviceable there were few days on which searches were not flown. Unfortunately, however, the northern patrols failed to achieve their object, for during the closing months of 1939 U-boats, armed merchant raiders, and German warships succeeded in passing through the North Sea into the **Atlantic**. The battleship *Admiral Graf Spee* had slipped through at the end of August and caused considerable anxiety until brought to an ignominious end at **Montevideo** four months later by British forces which included HMS *Achilles* of the New Zealand Division of the **Royal Navy**. The failure to prevent such break-outs was largely due to the fact that the reconnaissance patrols, owing to the limited range of the Anson, were weakest at the very place where they needed to be strongest, that is, immediately off the south-western coast of **Norway**. A second reason was that the enemy's attempts to break out of the North Sea were made under cover of bad weather in poor visibility. The failure to locate the *Scharnhorst* and *Gneisenau* in November 1939 may be attributed almost wholly to the latter cause.

Strong enemy opposition in the air over the North Sea also made it very difficult to maintain effective reconnaissance since at this time the **Royal Air Force** possessed no long-range fighter aircraft. The Anson, though reliable, had only light defensive armament, while the Hudson, which came into use in October, was also insufficiently armed. In air combat it lacked manoeuvrability and was regarded by some as difficult to handle. The inevitable result

¹ The total tonnage lost by U-boat action between September 1939 and the end of March 1940 amounted to 350,000 tons compared with 700,000 tons during the single deadly month of November 1942, when the Battle of the **Atlantic** was at its height. The outstanding achievement of the U-boat command during the first months of the war took place in the early hours of 14 October 1939, when a German U-boat, braving tides and currents, penetrated the defences of Scapa Flow and sank the battleship *Royal Oak* at anchor.

was that many air combats over the North Sea during the first months were indecisive. But there were a few successful engagements. On 1 January 1940 Pilot Officer Carey, ¹ whilst on patrol over the North Sea in a Hudson of No. 220 Squadron, encountered two Heinkels. He immediately attacked one of them. The first shots registered hits and the enemy aircraft crashed into the sea. Carey then turned his attention to the second Heinkel and, after exhausting his front-gun ammunition, manoeuvred so as to enable his rear gunner to fire on the enemy, but before the results of this engagement could be observed the German machine entered cloud and was lost. Unfortunately, a few months later both Carey and his navigator, Pilot Officer Vartan, ² were lost when their aircraft flew into the Newcastle balloon barrage while they were returning from patrol in thick weather.

In addition to the North Sea reconnaissance patrols, the airmen with **Coastal Command** engaged in various other tasks during the first winter of the war. Convoys were escorted, special searches made for suspicious or distressed vessels and protection given the fishing fleets, all of which involved long hours of tedious flying. Only occasionally were these patrols enlivened by a brush with an enemy plane or by the sighting and attack of a submerging U-boat, and even then decisive results were rare.

³ The arduous and monotonous nature of the work was accentuated by the unusual severity of the winter that year, with frost and snow over most of the **British Isles** for several months. The record book of one squadron in **Scotland**, with which several New Zealanders were flying,

contains this entry in January 1940:

Fourteen inches of snow covered the aerodrome. An attempt was made to clear two runways with a snow plough—finally runways were made by towing grass rollers behind a lorry. These proved satisfactory while freezing conditions lasted.

Under such conditions landing and taking off, particularly at night, was a hazardous business, and location of a base on return from a long patrol frequently proved very difficult when, in addition to the snow, there was fog or mist. Casualties were not uncommon.

From October 1939 the protection of convoys and the fishing fleets—the ‘Kipper’ patrols—along the east coast of **Britain** was shared by the fighter squadrons. Although, at first, there were few interceptions of enemy aircraft, these patrols did provide the

¹ Pilot Officer G. W. F. Carey, DFC; born **Christchurch**, 25 Apr 1916; joined **RAF** Mar 1939; killed on air operations, 14 Jul 1940.

² Pilot Officer P. K. Vartan; born **Dannevirke**, 18 Jun 1918; joined **RAF** Oct 1938; killed on air operations, 14 Jul 1940.

³ At the time, over-eager acceptance of inconclusive evidence of destruction led to exaggerated claims, particularly with regard to U-boats. Only one of these vessels was sunk as a result of air attack during the first six months of the war.

fighter pilots with some relief from the comparative inactivity and suspense that had been their lot since war began. Fighter Command had been organised principally to defend the **British Isles** from air attack, but instead of the mass raids expected there had been only a few small attacks on naval bases and warships at Rosyth and Scapa Flow. Indeed, for the first nine months, enemy activity was almost entirely confined to reconnaissance and occasional attacks on shipping in the North Sea.

In the new year when the enemy raids on coastal shipping increased, several New Zealand pilots were among those who reported engagements with German aircraft. Early in February Flying Officer Carbury ¹ shared a kill with two members of his squadron, the enemy machine, a Heinkel 111, being forced down into the sea by their attacks. But most of the encounters were inconclusive. Often after pursuing his quarry through cloud a pilot would perhaps get in a burst at long range and then lose touch. On the whole, fighter operations from British bases continued to be routine. The maintenance of monotonous 'standing patrols' over convoys and fishing vessels imposed a considerable strain on both the pilots and their aircraft, but these months spent on investigation and identification, with an occasional engagement, provided experience which was to be of great value in the hard fighting that lay ahead.

The early operations of Bomber Command were restricted both by British policy and the course of events, with the result that activity was mainly confined to training flights and reconnaissance over enemy territory by night. But some squadrons did see early action in the war at sea. Their task was to locate and attack units of the German Fleet. Unfortunately, training and equipment for such duties were in an elementary stage; moreover, the enemy warships were well defended, both by their own massed batteries of anti-aircraft guns and by squadrons of fighters. Thus while British bomber crews displayed courage and fortitude of a high order in pressing home attacks, their efforts could hardly be assured of success.

New Zealand airmen flew on several of these eventful missions. On the first day of the war Flying Officer Litchfield ² was navigator in the leading aircraft of a small formation of Wellingtons which made a search for units of the German Fleet reported at sea in the vicinity of Heligoland. The bombers flew through thunderstorms and ice-laden clouds but in the extremely bad visibility were unable

¹ Flying Officer B. J. G. Carbury, DFC and bar; born Auckland; joined RAF Sep 1937.

² Flight Lieutenant F. L. Litchfield; England; born Croydon, London, 21 Feb 1914; joined RAF 1936; transferred RNZAF Jul 1945; p.w. 6 Aug 1941.

to locate a target. On the afternoon of the following day a force of 15 Blenheims and 14 Wellingtons was detailed to attack enemy warships observed by reconnaissance that morning near **Wilhelmshaven** and in the Schillig Roads. As well as fighter opposition, there was considerable anti-aircraft fire from both ships and shore batteries and altogether five Blenheims and two Wellingtons were lost. Two New Zealanders who took part were fortunate to survive. Squadron Leader Lamb ¹ led a section of Wellingtons but, before they could attack, they were set upon by enemy fighters and two of the Wellingtons were shot down. After jettisoning his bombs, Lamb succeeded in reaching cloud cover and returned safely. Sergeant Innes-Jones ² was navigator in one of a formation of five Blenheims which found and attacked the *Admiral Scheer* in the Schillig Roads. His was the only aircraft to pass through the withering fire from the warship and return to England. From German sources we now know that several bombs hit the *Scheer* but failed to explode—being fused for eleven seconds delay, they probably bounced overboard from the armoured deck.

Further searches were flown at intervals during the next weeks but it was not until 3 December that another attack was made on German warships. On that day twelve Wellingtons found and bombed two cruisers and six smaller craft off Heligoland. The bombs were dropped from 10,000 feet and this enabled the aircraft to escape without casualties. However, it also reduced the effectiveness of the attack, and the only damage inflicted was the sinking of a minesweeper through which a bomb passed without exploding. Eleven days later twelve Wellingtons were sent to search the Heligoland area. Over the North Sea the crews found themselves flying through storms, with heavy cloud down to within a few feet of the sea. Nevertheless the formation kept on course and was able to locate a German naval force at sea. As they approached

their target the Wellingtons met heavy anti-aircraft fire. They were also attacked by fighters. Three bombers went down in flames while a fourth, captained by Flight Lieutenant Hetherington,³ was heavily hit and later crashed while attempting to land at base. The air battle developed into a running fight along the German islands and continued until the bombers were well on their way back to England. One pilot reported seeing four aircraft crash into the sea in flames and records in his diary: 'It was growing dark and these aircraft burned for some time after hitting the water. They looked

¹ Squadron Leader L. S. Lamb; born **Wellington**, 5 Aug 1910; joined **RAF** 1930; killed in aircraft accident, 30 Oct 1939.

² Squadron Leader M. H. S. Innes-Jones; **RNZAF**; **Blenheim**; born **Wellington**, 5 May 1917; joined **RAF** 1934; transferred **RNZAF** Jan 1944.

³ Flight Lieutenant E. J. Hetherington; born **Timaru**, 16 Oct 1914; joined **RAF** 1936; killed on air operations, 14 Dec 1939.

like four enormous beacons and not only lit up the water but illuminated the sky as well.' Squadron Leader McKee led the British formation this day and he was subsequently commended for 'his leadership and accurate flying without which losses might have been heavier'. Flying with him was Corporal Knight¹ who, as chief wireless operator of the formation, succeeded in obtaining useful bearings from German stations and in passing messages to base, including sighting reports of the enemy warships. He performed this task under difficult conditions and in spite of continual distractions, not the least of which was the enemy tracer passing near him.

Aircraft from Bomber Command continued to search the North Sea, but after further heavy losses in an engagement with German fighters on 18 December 1939, when 12 out of 24 Wellingtons were shot down, orders were given for the cessation of daylight attacks and

reconnaissance in force close inshore. These early bombing operations had, in fact, already demonstrated what was to be confirmed by subsequent events—that in the face of the superior German fighter force, unescorted heavy bombers with low speed and restricted firepower could not be successfully employed in daylight attacks.

Meanwhile, from the first nights of the war, Whitleys and Wellingtons of Bomber Command had been dropping propaganda leaflets over German towns. These missions had a dual purpose. It was hoped that the presence of British aircraft over many parts of the Reich would impress their own vulnerability on the German people, Goering having previously boasted that enemy aircraft would never penetrate the German defences. More important, the British crews would be able to acquire useful information and experience. They were ordered to study landmarks, the effectiveness of the German blackout, the position of searchlights and guns, activity on enemy airfields, and generally make themselves familiar with the country over which they flew. Altogether, these long flights by night over enemy territory contributed much to the later efficiency of Bomber Command, paving the way for improvement not only in high-altitude flying but also in the provision of aids to navigation, in facilities for emergency landings and escapes from damaged machines. The aircraft engaged in these early 'leaflet raids' met little opposition from the enemy defences, possibly because the Germans felt the leaflets could do little harm and did not wish to betray gun and searchlight positions. All the same the conditions under which the bomber crews operated during the icy winter

¹ Flight Lieutenant C. B. G. Knight, DFM; **RNZAF**; **Whenuapai**; born Tolaga Bay, 7 Jun 1912; joined **RNZAF** 1937. Knight was the first member of the **RNZAF** to be decorated in the Second World War.

of the first year of the war were extremely severe. They frequently flew through vile weather in which wings and fuselage were so heavily coated with ice that it became difficult to maintain height. Ice would

also jam the ailerons, elevators or rudders and cause the pilot temporarily to lose control. All too often the heating system would fail and men would suffer acute pain from the cold at high altitudes. Frostbite was common. On many flights the crews saw the strange light of St. Elmo's fire playing about the wing tips and propellers; sometimes the whole aircraft would be outlined in violet light, sparks would fly from one point to another, and every movement of the crew crackled in the electric air. Even the leaflets crackled and gave off sparks as they dropped through the chutes after the bundles had been cut. One pilot, on experiencing this phenomenon for the first time, declared that he found it 'much more frightening than being shot at'. In these early days the crews also had little radio assistance and, for the most part, they had to rely upon dead-reckoning navigation.

The kind of thing that could happen on these missions is well illustrated by the experiences of Pilot Officers Gray ¹ and Long ² one night in November 1939. Gray was the captain and Long the navigator of a Whitley detailed to drop leaflets over Cuxhaven and then reconnoitre for warships in that area and in the vicinity of Heligoland. The first part of the flight was uneventful, but just after the leaflets had been dropped the aircraft ran into a snowstorm and, as a result of ice formation, became extremely hard to control. Then, a few moments later, it was struck by lightning which tore away large portions of the fabric on both wings. Gray nevertheless determined to complete his task and turned his damaged machine towards Heligoland. But soon he found great difficulty both in climbing and maintaining airspeed, owing to the damage and the increasing weight of ice. Finally the Whitley began to lose height rapidly and it was not until it had fallen several thousand feet that Gray managed to regain some sort of control. Now quite certain that a landing in the sea was inevitable, he ordered his wireless operator to send an SOS and his navigator to prepare the dinghy for launching. However, after a further struggle with the controls, he found he could just manage to hold the aircraft in the air so requested a course to steer for home. During the long return flight across the North Sea, which had of necessity to be carried out at a low altitude, heavy rainstorms were

met and the aircraft was only just controllable—any easing of the pressure required to

¹ Flying Officer K. N. Gray, DFC, Czechoslovakian War Cross; born **Christchurch**, 9 Nov 1914; joined **RAF** 1937; killed in aircraft accident, 1 May 1940.

² Flying Officer F. H. Long, DFC; born **Masterton**, 16 Jul 1916; joined **RAF** May 1939; killed on air operations, 13 Mar 1941.

maintain it on an even keel at once resulted in a downward plunge. But Gray, of small build and not particularly robust, displayed exceptional skill in handling his aircraft; eventually the English coast was reached and the Whitley landed at an airfield in East Anglia. ¹

New Zealand airmen were also with the bomber squadrons which, from mid-December, flew offensive patrols over enemy seaplane bases as a counter-measure to the laying of magnetic mines by these aircraft in the entrances to British ports. The patrols visited the islands of Sylt, Borkum, and Norderney and attacked seaplanes taking off and landing. They also bombed any lights that were seen, thus restricting enemy activity by causing the dousing of flare paths. These operations, which included several attacks on the bases themselves, ² caused a notable reduction in enemy minelaying from the air and gained time for the development of a reply to the German magnetic mine.

These early months of the war with Bomber Command hold special interest for the Dominion in that they saw the formation of No. 75 New Zealand Squadron, soon to take a prominent part in the first bombing raids on **Germany**, and with which many New Zealanders were to serve with distinction. Altogether 1370 aircrew from the Dominion were to serve with the squadron for various periods during the Second World War, and of these men 442 lost their lives whilst flying with the unit and a further 77 after leaving it. The squadron's story really begins early

in 1937, when New Zealand decided to obtain 30 Wellington bomber aircraft from the **United Kingdom**.³ Shortly afterwards the preliminary arrangements were concluded, it being understood that the first six of these aircraft would be ready for transit about August 1939. At the same time a New Zealand officer, Squadron Leader Buckley,⁴ was sent to England to gain experience with this new type of aircraft.

¹ Both Gray and Long subsequently lost their lives while serving with Bomber Command. Gray was killed a few months later when his Whitley struck a hill in bad weather and was burnt out. Long failed to return from an attack against **Berlin** early in 1941.

² On 19 March 1940 the seaplane base at the island of Sylt was the target for the largest-scale bombing raid thus far launched by either side. Thirty Whitleys and 20 Hampdens were employed in the attack, which was primarily a reprisal for a raid on Scapa Flow by 15 German bombers four days previously.

³ This decision was one of the results of the acceptance by the New Zealand Government of a report submitted by Air Chief Marshal Sir Ralph A. Cochrane on the future policy and development of the New Zealand Air Force. He was at this time serving with the **Royal Air Force** as a Group Captain and was lent to New Zealand to make this report. Air Chief Marshal Cochrane was New Zealand's first Chief of Air Staff and from 1950 to 1952 Vice-Chief of Air Staff, **Royal Air Force**.

⁴ Air Commodore M. W. Buckley, CBE, Legion of Merit (US); **Wellington**; born Seacliff, 3 Aug 1895; served in RNAS during First World War; joined NZPAF 1926; commanded NZ Flight, 1939–40; No. 75 (NZ) Sqdn, 1940; RAF Station, Feltwell, 1941; AOC Northern Group, **Auckland**, 1942–43; AOC No. 1 (Islands) Group, **Guadalcanal**, 1943–44; DCAS, **RNZAF**, 1944–45; AOC RNZAF HQ, **London**, 1946–50.

He was attached to one of the first squadrons in Bomber Command to be equipped with Wellingtons and later served as its flight commander

at Marham, in Norfolk.

It was at this station, on 1 June 1939, that a New Zealand **Air Force** unit was established, with Buckley as its commanding officer, to form and train crews and then despatch the Wellingtons to New Zealand. Meanwhile arrangements were being made to supply men to fly the aircraft. Some were sent from New Zealand, but most of the pilots and navigators were selected from aircrew already serving with or on attachment to the Royal **Air Force**. During the next few weeks men began to arrive at Marham in ones and twos until, by the end of July, the unit consisted of twelve officers, all pilots, and six airmen. ¹With Squadron Leader Buckley doing the flying training and Squadron Leader Kay in charge of navigation, the unit was busy during this and the following months preparing for the 13,000-mile flight to New Zealand.

The advent of war, however, raised a fresh problem, for all the members of the unit were now keen to stay in **Britain** and take part in operations against the enemy. This was solved by the prompt action of the **New Zealand Government**, which waived its claim to the aircraft and placed the personnel of the unit at the disposal of the **Royal Air Force**, an offer that was readily accepted. It now appeared that the unit would be disbanded and its members posted to **RAF** squadrons, but the Air Officer Commanding-in-Chief, Bomber Command, expressed a strong desire that the New Zealand Flight, as it was now known, should retain its identity and be employed as a separate unit within his command. His suggestion was forwarded to New Zealand by the Air Council, who pointed out that, apart from its direct military value, the presence of a New Zealand unit, however small, would have a stimulating effect on the peoples of Great Britain and **France**. ² The Government expressed willingness to co-operate but indicated that, at the moment, it would not be possible to provide the necessary flying and maintenance personnel for a full squadron without seriously delaying the expansion of the training schemes to which New Zealand was already

¹ They were Squadron Leaders M. W. Buckley and C. E. Kay,

Flight Lieutenant C. C. Hunter, Flying Officers J. Adams, A. A. N. Breckon, J. N. Collins, A. B. Greenaway and F. J. Lucas, Pilot Officers W. H. Coleman, T. O. Freeman, W. M. C. Williams and N. Williams, Sergeants W. D. Steven and T. R. Read, and Leading Aircraftmen D. C. McGlashan, J. T. White, E. P. Williams and R. A. J. Anderson. These men were to form the first flight. They were joined in August 1939 by Squadron Leader R. J. Cohen, who was to command the second flight, and Flight Lieutenant I. G. Morrison, who was to be a member of it. Owing to the war this second flight was never formed.

² At this time a Canadian fighter squadron was being formed in England and a Royal Australian Air Force squadron was preparing to commence operations with Coastal Command.

committed. Early in December advantage was taken of the presence in London of the Hon. P. Fraser, then Deputy Prime Minister, to discuss the proposal further, when it was suggested by Air Ministry that if sufficient New Zealand personnel were not available, the full complement could be made up by men from the British Isles. Mr. Fraser confirmed the desirability of forming a New Zealand Squadron and agreed to discuss this suggestion with his colleagues and the New Zealand Air Staff on his return.

Meanwhile the members of the New Zealand Flight, somewhat restless at the uncertainty regarding the future of their unit, had begun training for an operational role. This was necessary since, until the outbreak of war, the unit was interested only in the flight to New Zealand and therefore was not proficient in armament, photography or operational flying. During the second half of September the flight had moved to RAF Station, Harwell, and then, in January 1940, to Stradishall, near Newmarket. A further move took place in the following month to Feltwell, in Norfolk, where at last the unit found a more permanent home.

During this period all kinds of technical and administrative difficulties had to be overcome. Equipment for training had to be

borrowed from other units; key maintenance personnel were posted and had to be replaced. When aircraft arrived they were mere skeletons and had to be fitted with all the gear used on operations. But under Buckley's enthusiastic leadership such difficulties were overcome and the flying training continued. Gradually more air-crew, including a number of New Zealanders, were posted to the unit by the **Royal Air Force**, which also supplied additional maintenance personnel. Then, early in March, the New Zealand Government finally approved the formation of a New Zealand Squadron within the **Royal Air Force**, and shortly afterwards, on 1 April 1940, **Air Ministry** issued instructions that 'No. 75 (N.Z.) Squadron should be formed round the existing New Zealand Flight at Feltwell.' As far as possible it was to be manned by New Zealanders then serving in **Britain**, but for the time being ground and maintenance staff would be provided by the Royal Air Force.

Meanwhile, in addition to its training programme, the squadron had already commenced flying against the enemy. The first sortie was made on 27 March, when three Wellingtons were despatched to drop leaflets on Brunswick, Ulzen and Luneberg. The captains of the three aircraft were Squadron Leader Kay, Flying Officer Collins ¹

¹ Flight Lieutenant J. N. Collins; born **Wellington**, 31 Mar 1917; joined RNZAF Jul 1939; killed on air operations, 21 May 1940.

and Flying Officer Adams. ¹ Pilot Officer Freeman ² flew as second pilot to Kay, with LAC Williams ³ as wireless operator. Pilot Officer Harkness ⁴ was second pilot to Collins and Pilot Officer Larney ⁵ was second pilot to Adams. The remainder of the crews were men from **Britain**. Difficult weather conditions were experienced throughout the flight but the mission was completed without incident, the squadron record book reporting briefly that:

The three aircraft took off independently and set course for Dorum on the German coast. Leaflets were dropped over the areas detailed from

heights of 7–10,000 feet. Navigation was by dead reckoning and ‘astro’, very few fixes being obtained and these were considered unreliable. Squadron Leader Kay had considerable success with Astro navigation which proved fortunate as on entering heavy clouds the wireless transmitter burnt out and was useless for the rest of the flight. Exceedingly bumpy weather prevailed and the freezing was also severe, the temperature at one stage being -28° .

Four similar sorties were made early in April by Wellingtons from the New Zealand Squadron, the captains of which were Flight Lieutenant Breckon,⁶ Flying Officers Coleman,⁷ N. Williams⁸ and W. M. C. Williams.⁹ Although searchlights were active on each occasion they failed to locate the high-flying aircraft, which were able to complete their task successfully. The opening of the Norwegian campaign a few days later brought the squadron fresh duties and saw the start of its bombing operations against the enemy.

* * * * *

During the early months of the war a small group of New Zealand airmen saw service in **France** with the squadrons of the **Royal Air Force** which had been transferred to that country at the

¹ Wing Commander J. Adams, DFC, AFC; born **Christchurch**, 31 Aug 1913; joined **RAF** 1937; transferred **RNZAF** Jun 1939; commanded No. 5 Blind Approach Training Flight, 1941; CO No. 40 Sqdn, **RNZAF**, 1943–44.

² Wing Commander T. O. Freeman, DSO, DFC and bar; born Lawrence, 5 Jun 1916; joined **RAF** 1936; transferred **RNZAF** Jul 1939; commanded No. 115 Sqdn, 1941–42; commanded **RNZAF Fighter Wing, New Georgia**, 1943; killed on air operations, 17 Dec 1943.

³ Flight Lieutenant E. P. Williams, DFM; **Wellington**; born **Rotorua**, 22 Sep 1916; joined **RNZAF** May 1938.

⁴ Squadron Leader D. J. Harkness, DFC; born Midhurst, Taranaki, 16 Sep 1916; joined **RAF** Dec 1938; killed on air operations, 31 May 1942.

⁵ Squadron Leader G. K. Larney, DFC; **RAF**; born **Wellington**, 18 Oct 1912; joined **RAF** Jun 1939.

⁶ Wing Commander A. A. N. Breckon, DFC; **RNZAF**; **Ohakea**; born **Auckland**, 28 Nov 1913; joined **RAF** 1935; transferred **RNZAF** Jun 1939; commanded Navigation Training Sqdn, Bassingbourn, 1940–41; held various commands and staff appointments in New Zealand and **Pacific**, 1941–45.

⁷ Flying Officer W. H. Coleman, DFC; born **Christchurch**, 29 Nov 1916; joined **RAF** 1937; transferred **RNZAF** Jul 1939; killed on air operations, 25 Jul 1940.

⁸ Flight Lieutenant N. Williams, DFC; born Frankton Junction, 4 Oct 1915; joined **RAF** 1937; transferred **RNZAF** Jul 1939; killed on air operations, 11 May 1941.

⁹ Squadron Leader W. M. C. Williams, DFC; born **Wanganui**, 31 Aug 1912; joined **RAF** 1936; transferred **RNZAF** Jul 1939; killed in aircraft accident, 15 Jul 1943.

outbreak of hostilities. The air units among which these men were scattered were organised in two separate parts, each having distinct functions. The first part, the Advanced Air Striking Force, was a bomber force made up of ten Battle squadrons from Bomber Command, under whose control it remained for several months. The idea behind its despatch to **France** was that, should the Germans begin bombing, these medium bombers could retaliate on Ruhr targets at closer range than from **Britain**. The second part, the Royal Air Force Component, was intended to form an integral part of the **British Expeditionary Force** for which it was to provide reconnaissance and protection. It thus consisted

of aircraft for reconnaissance, together with four fighter squadrons, all of which were under the control of the Commander-in-Chief of the British Army in **France**, General Lord Gort.¹ This division of control and the need for closer co-operation with the French led, in January 1940, to the creation of a unified British Air Force France Command but, even so, many problems remained unsolved.

Until the German attack on the Low Countries opened early in May 1940, no bombing operations were flown from **France** since, as has already been indicated, the Allies were anxious to avoid initiating any action which would arouse German retaliation. For reasons of his own, the enemy also refrained from starting any unrestricted bombing offensive, so that instead of the inferno which many had anticipated there was an unexpected, if foreboding, calm. Nevertheless, although the squadrons in **France** made no bombing raids, they were employed in exercises with the ground forces in their areas and on reconnaissance and leaflet dropping operations over **Germany**. While most of these missions were uneventful they were occasionally enlivened by the impartiality with which some anti-aircraft gunners treated all aircraft they sighted. One New Zealander with No. 73 Squadron had the unenviable experience of being shot down over Calais in September by the French artillery to whom he was demonstrating a Hurricane for recognition purposes. Fortunately he was uninjured and was able to make a forced landing on the beach near the town. There were also odd incidents such as when one British crew, after a leaflet dropping sortie, inadvertently landed at a German airfield near the frontier. Fortunately they realised their mistake before the Germans reached them and took off again to reach **France** safely.

¹ Field Marshal Viscount Gort, VC, GCB, CBE, DSO, MVO, MC, Legion of Honour (Fr); born 10 Jul 1886; joined Grenadier Guards, 1905; Chief of Imperial General Staff, 1937–39; C-in-C BEF, 1939–40; Inspector-General to the Forces, 1940–41; Governor and C-in-C, Gibraltar, 1941–42; Governor and C-in-C, **Malta**, 1942–44; High Commissioner and C-in-C, Palestine, and High Commissioner, **Transjordan**, 1944–45; died 31 Mar 1946.

For fighter pilots stationed with the British Army close to the Belgian border the winter of 1940 was a period of grinding monotony. Day after day they made their way through snow, slush, and mud to their cheerless dispersal points, to remain at readiness throughout the daylight hours. This tense waiting was always one of the most trying and difficult situations with which fighter pilots had to contend, and during this period it was particularly hard for them to accept continued inaction.

In some contrast to this dull existence were the experiences of the men serving with the two Hurricane squadrons attached to the Advanced Air Striking Force near the Franco-German border. One of these pilots, Flying Officer Kain, ¹ nicknamed 'Cobber' by his comrades in No. 73 Squadron, was soon to become widely known for his exploits. Throughout his school days Kain had been keen on flying and after leaving college had joined the **Wellington Aero Club, making his first solo flight after only six hours' dual instruction. In 1936 he had travelled to England where he obtained a short-service commission in the **Royal Air Force** within a few months of his arrival. He trained as a fighter pilot and quickly became an expert at aerobatics, first with Gladiators and later with Hurricanes, and in 1938 gave an exhibition in the Empire air display at Hendon. Although deservedly popular among his fellow pilots, Kain was a strong individualist and soon became recognised as something of a 'wild devil'. In France his squadron was based at Rouvres, a small village midway between Verdun and Metz and roughly 35 miles from the frontier over which the Hurricanes patrolled. One who knew the squadron well declares they were a 'happy, carefree bunch, full of confidence and making the best of the situation in which they found themselves'. At first incidents were few, but on 30 October 1939 the first enemy aircraft was shot down over **France** by an English pilot of No. 1 Squadron. A few days later, on 8 November, Kain scored his squadron's first victory by destroying a Dornier 17. He was on the ground at his aerodrome when he first sighted the enemy aircraft flying high above. He leapt into his Hurricane and climbed to intercept. At**

25,000 feet he was able to close on the Dornier and get in three bursts at short range. Nothing happened for a moment, then white smoke began to pour from one of its engines. Kain broke away, but as the enemy did not fall he climbed again and opened fire, continuing until he was within fifty yards. At this point the Dornier banked steeply and spiralled to earth to crash in the middle of a small village, ten miles north-east of Rouvres. 'Fortunately', says a

¹ Flying Officer E. J. Kain, DFC; born Hastings, 27 Jun 1918; joined **RAF** 1937; killed in flying accident, 7 Jun 1940.

contemporary report, 'beyond a bedridden woman who suddenly found the use of her legs again, a few broken windows, and a burnt out cowshed, no damage was caused'. But for some months such combats were the exception rather than the rule. Apart from one day towards the end of November when six enemy aircraft were destroyed, one of them by Kain, interceptions were at a minimum throughout the winter months. Incessant rain waterlogged airfields; then came heavy snowfalls accompanied by blizzards which gave the snow a treacherous coating of ice. Nevertheless, during the greater part of this time the fighter pilots continued to maintain readiness or fly 'standing' patrols over vital areas.

It was not until March that the enemy renewed his activity over **France**. On the second day of that month Kain again distinguished himself in an encounter with seven Heinkels which he chased into **Germany**. Then, on being attacked by fighters, he turned and shot one down. Eventually, although nearly blinded by smoke and fumes, he managed to regain a friendly airfield.

During the next few weeks Kain continued to figure conspicuously in his squadron's activities. On one particularly active day towards the close of the month 14 British pilots had combats and claimed seven of the enemy without loss to themselves. Kain accounted for one of the aircraft destroyed, and possibly a second, before he himself was forced to bale out of his blazing Hurricane. ¹ He landed alongside a wood to find

himself in the midst of a skirmish between opposing patrols so sought cover and then made his way on foot towards what he hoped were the French lines. After a short time he was picked up by a French captain who took him on the back of a motor cycle to the nearest village, where he received medical attention. Kain was up and about the following day, walking with the aid of a stick.

About the same time Flying Officer Stratton,² who was with No. 1 Squadron, shared in the destruction of the first Messerschmitt 110 to be shot down by the **Royal Air Force** over **France**. He was flying

¹ He afterwards told how 'Three of us were on patrol when we sighted four Messerschmitts which came around at us in twos. We turned with them and I got in a side shot at the last one. He stalled and then spun down with smoke and flame pouring out of his machine. Then more Messerschmitts appeared and the sky seemed full of planes dashing about. Found another flying loose and put a burst at him. He turned on his side and went down smoking. Then the sky seemed suddenly clear. But almost at once there was a crash, the top of the hood was shot away and my machine caught fire. The shock must have knocked me out for a moment since when I came to the Hurricane was in a steep dive and flaming. Could not get out until I'd pulled her out of the dive. By that time my face and hands were burnt a bit. Forgot to pull the ripcord at first and when the parachute opened it jerked me sideways—one shoulder strap had slipped off. Down I went through a bank of cloud....'

² Wing Commander W. H. Stratton, DFC and bar; **RNZAF**; **London**; born Hastings, 22 Jul 1916; joined **RAF** 1937; transferred **RNZAF** Jan 1944; commanded No. 134 Sqdn, **Middle East** and **India**, 1943–44; OC Flying Wing, **Wigram**, 1945; served with **BCOF**, **Japan**, 1947–48.

in a section of three Hurricanes which intercepted nine of these new enemy fighters north-east of Metz. The battle began at 26,000 feet and Stratton later reported:

I endeavoured to turn on to the enemy nearest me, but immediately went into a spin. A number of Messerschmitts were firing their rear guns. I recovered from my spin and was beginning a steep climb when a 110 dived past in front of me, so I made a steep diving turn on to his tail. He made little effort to shake me off and I expended all my ammunition. When I broke away one of his engines was on fire.

This same aircraft had previously been damaged by the leader of the section. After Stratton's attack it was last seen gliding in an easterly direction giving out clouds of smoke. The German pilot escaped by parachute and was later captured. The third pilot of the section had meanwhile damaged two other Messerschmitt 110s. All three airmen were afterwards entertained at a special dinner in **Paris** (at Maxim's in the Rue Royale) which had been promised by Air Marshal Barratt ¹ to the first pilot to destroy one of these aircraft. These successful combats deserved celebration since they dispelled the rumours which usually surrounded new enemy aircraft, and which in the case of the Messerschmitt 110 had credited it with a higher performance than was proved on closer acquaintance.

Sporadic engagements with German reconnaissance machines continued until the end of April when there was a lull in air activity on the eastern frontier. New Zealand pilots were involved in several inconclusive encounters but most of their work consisted of routine patrols covering army movements into the outer defences of the Maginot Line. The lull was short-lived for, on 10 May, **Germany** invaded the Low Countries, and the few squadrons of the **Royal Air Force** in **France** were soon engaged in violent air battles with practically the whole strength of the **Luftwaffe**. But before this happened the Germans had already invaded **Norway** and **Denmark** to secure their northern flank against any possible diversion from the projected campaign against **France**.

¹ Air Chief Marshal Sir Arthur S. Barratt, KCB, CMG, MC, Order of the Crown and Croix de Guerre with Palm (Bel), Order of Polonia Restituta (Pol), Legion of Honour (Fr), Croix de Guerre

with Palm (Fr); RAF (retd); England; born Peshawar, India, 25 Feb 1891; joined Royal Artillery 1910; seconded RFC 1914 and RAF 1918; permanent commission RAF 1919; AOC-in-C, British Air Forces in France, 1940; AOC-in-C, Army Co-operation Command, 1940–43; AOC-in-C, Technical Training Command, 1943–45; Inspector-General of the RAF, 1945–47.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 3 – MEETING THE GERMAN ATTACK

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Meeting the German Attack

THE Germans began their invasion of **Norway** and **Denmark** at dawn on 9 April 1940. Within twenty-four hours, as a result of careful preparation and amazing treachery, all **Denmark** was in German hands and the principal Norwegian ports and airfields had been captured. The story of what happened in **Norway** reads like a modern version of the Trojan Horse. There the Germans had created a large group of sympathisers under a Major Quisling and these people—known as ‘The Fifth Column’—formed the spearhead of the attack. They were quickly supported by paratroops and by infantry disguised as seamen or civilians and previously embarked on ships trading with **Norway**. The capture of **Oslo**, which fell in two hours, was typical. Fifth columnists seized the main buildings and radio stations and then, helped by airborne troops, held them until seaborne forces broke through the harbour defences to reinforce.

Air power was, however, the decisive factor. It enabled the Germans to make simultaneous airborne landings at key points in both countries and then fly in transport aircraft with infantry and supplies. In Denmark the airfields at Aalborg fell to the Germans with ease, as did the whole of Jutland and Copenhagen itself; demonstrations by bombers and fighters, together with a massed fly past of transport aircraft bound for **Norway**, had the desired effect and brought about complete capitulation. In **Norway** airborne landings at the main ports were quickly followed by fighter attacks on the airfields and the small Norwegian Air Force, caught unawares, was almost annihilated on the ground. Paratroops then landed and secured the airfields as forward bases for the **Luftwaffe**. At Trondheim, where the airfield did not fall until the second day, the Germans improvised a landing strip in the snow near the port and transport aircraft were able to fly in with their loads. Reports of these events were received in **London** with incredulity; indeed there were many in **Britain** who, unappreciative of the extent to which air power could now be exercised over narrow waters, felt that by invading **Norway** Hitler

had blundered. They were soon to be disillusioned.

From the outset the small Norwegian army fought gallantly, but the odds against it increased rapidly as German reinforcements arrived by sea and air with little opposition. An appeal was made to the Allies for assistance,¹ whereupon a frontal attack by the Royal



NORWAY

Navy on Trondheim was planned, but this had to be abandoned in the face of German air superiority. On 14 April the advance party of the **Allied Expeditionary Force** landed in the Narvik area

¹ The complicated pattern of political events at this time is fully described in T. K. Derry's *The Campaign in Norway*, one of the volumes of the Official British War History.

in an effort to cut off enemy supplies of Swedish iron ore. At the same time an attempt was made to capture Trondheim as a base for operations by landing forces at two small ports to the north and south, Namsos and Aandalsnes. But by the time these landings took place the Germans had so extended their hold that most of southern **Norway** was under their control. The pressure northwards from **Oslo** increased and the Allied and Norwegian armies were driven back. Very soon the

enemy's unremitting air attacks on these forces, on their bases and lines of communication, made further resistance hopeless. The Allied troops were re-embarked early in May and resistance left to the isolated Norwegian units fighting in the mountains. Thus, when the Battle of **France** began on 10 May, **Norway** was practically in German hands. Only at Narvik in the north did the Allies enjoy a brief success, in which both the Royal Navy and **Royal Air Force** played a notable part. However, the pressure of events caused the evacuation of Narvik to follow during the first week of June.

During the short campaign the **RAF** did what it could to bring aid to the hard-pressed Norwegians and to units of the Allied armies which joined them. Among the tasks in which New Zealand airmen assisted were reconnaissance of the Norwegian coast, laying mines, and bombing enemy airfields and shipping. In particular, the spacious airfield at Stavanger was frequently attacked by both Bomber and **Coastal Command** aircraft during the first weeks. The initial attack on this target was made by Bomber Command at dusk on 11 April when six Wellingtons, preceded by two Blenheims, bombed at low level in the face of intense anti-aircraft fire. One Wellington, in which Pilot Officer Rankin ¹ was flying as second pilot, was seen to crash in flames after being hit. The same night New Zealanders flew with the force of Whitleys and Hampdens which swept the Kattegat and attacked several vessels. On the following morning 23 Blenheims, 36 Wellingtons, and 24 Hampdens were despatched to attack a naval force reported by a reconnaissance aircraft. Most of the Blenheims abandoned the search because of low cloud, while the Wellingtons saw little and lost three of their number in an engagement with Messerschmitts. Only one formation of twelve Hampdens sighted a target, bombing two warships without success. Six Hampdens were lost, one of them captained by Flying Officer Johnstone. ²



THE BATTLE OF FRANCE—situation on 18 May 1940

¹ Pilot Officer D. A. Rankin; born **Wellington**, 23 Nov 1914; joined **RAF** Mar 1939; killed on air operations, 11 Apr 1940.

² Flying Officer K. J. A. Johnstone; born **Suva**, 3 Jul 1915; joined **RAF** 1937; killed on air operations, 12 Apr 1940.

Subsequent attacks on both ships and airfields proved equally ineffective in hindering the German occupation of **Norway**. This was really not surprising for no preparations had been made and the aircrew lacked many of the things necessary for successful bombing, such as large-scale target maps and photographs that could be studied beforehand. Indeed, they often crossed the North Sea searching for the targets allotted them with nothing better than a sheet of an extremely small-scale map or a tracing from the town plans in a tourist guide to **Norway**. In consequence a considerable number of crews were unable to find their objectives. A second adverse factor was the weather since, by day, the British aircraft, operating without fighter escort, were ordered to attack their targets only when they had cloud cover. This often obliged the pilots to turn back. On the other hand the clouds that were deemed indispensable to daylight attack were generally accompanied by foul weather. Moreover the whole of **Norway** was still deep in snow, rendering identification of landmarks difficult; the upper air was bitterly

cold, and when clouds gathered they were laden with snow, freezing drizzle and hail. Flying conditions over the North Sea were also treacherous, with gales accompanied by rain and sleet frequently sweeping across it.

Wellingtons from No. 75 Squadron made a number of sorties in the course of the campaign. On 12 April four crews took part in a search for enemy warships reported off south-west **Norway**. In that area they met cloud down to sea level, with the result that it proved impossible to locate a target. All however returned safely. On two occasions during the next fortnight small formations made attacks on the enemy-held aerodromes at Stavanger and Aalborg. But probably the most interesting mission undertaken by the squadron during this period was a special reconnaissance of Narvik Fiord, far to the north. This was flown on 12 April by a Wellington captained by Flight Lieutenant Breckon.¹ At this time it was known that the Germans held Narvik in force. A naval battle had been fought two days previously and the **Royal Navy** was to sail up the fifty miles of the fiord on 13 April to complete the destruction of German naval units in the Narvik area. Breckon's reconnaissance was in preparation for the second attack. The Wellington took off at dawn from an airfield in the north of **Scotland** and, in steadily deteriorating weather, flew over a thousand miles along the Norwegian coast to Narvik Fiord. During the reconnaissance

¹ Pilot Officer D. J. Harkness and LAC E. P. Williams were members of his crew, which also included a naval observer.

of the fiord itself, strong winds and snowstorms caused great difficulty in controlling the aircraft.

'In places the clouds came down almost to sea level', Breckon afterwards reported. 'Visibility was reduced to 500 yards or less and we had the most terrific bumps that members of the crew had ever experienced. At one point when we were flying at 200 feet in a heavy snowstorm we doubted whether we should be able to find our way safely out of the

fiord.’

Altogether the Wellington was in the air for over 14 hours, making this the longest reconnaissance that had been flown up to this time. Three days later Breckon made another flight of nine and a half hours to Trondheim.

Similar patrols were flown by other New Zealanders during the first days of the campaign. On 9 April Squadron Leader L. E. Jarman, ¹ as captain of a Wellington from No. 9 Squadron in Bomber Command, made a reconnaissance of part of the Norwegian coast. He had very little cloud cover and his machine came under heavy fire from the ground. He also narrowly missed interception by enemy fighters but managed to secure useful information on the disposition of German naval forces at Kristiansand, Bergen, and at intermediate points. As flight commander of his squadron, Jarman subsequently led formations in several attacks on targets in Norway, and on one occasion his was the only aircraft to reach and attack Stavanger airfield in the face of weather conditions which compelled the return of the other aircraft engaged in the operation. Jarman had previously served with an RAF bomber squadron in the Middle East. In May 1940 he was commended for his ‘consistent courage and determination’ in early operations with Bomber Command.

Another New Zealander to distinguish himself in the opening days of the Norwegian campaign was Pilot Officer Tacon, ² who flew a Hudson of No. 233 Squadron, Coastal Command. During one reconnaissance flight to Utsirc, south of Bergen, he was in combat with a Heinkel which eventually made off after being hit and its rear gun silenced. On another occasion, while searching for the battle cruiser *Scharnhorst*, he located and attacked three anti-aircraft ships. Shortly afterwards he made a successful reconnaissance of

¹ Group Captain L. E. Jarman, DFC; RAF; born Christchurch, 17 Aug 1907; joined RAF 1929; permanent commission 1934; CFI, No. 23 OTU, 1941; commanded RAF Station, Litchfield, 1941–42; SASO, No. 93 Group, 1942–43; commanded RAF

Station, Kirmington, 1943; RAF Station, Wyton, 1943–44; SASO, No. 205 Group, **Italy**, 1944–45.

² Wing Commander E. W. Tacon, DSO, MVO, DFC and bar, AFC; **RAF**; born **Napier**, 6 Dec 1917; joined **RAF** May 1939; **Coastal Command**, 1939–41; flying training appointments in **Canada**, **New Zealand** and **United Kingdom**, 1942–44; commanded No. 236 Sqn, 1944; p.w. 12 Sep 1944; Commander of the King's Flight, 1946–50.

Haugesund and obtained good photographs of the port and shipping from a low level. While making a second run over the port his starboard engine was hit by anti-aircraft fire, but Tacon succeeded in nursing his Hudson back across the North Sea, a distance of some 300 miles, and reported useful information to his base. But probably his most daring exploit was when he volunteered to carry a naval officer to 'spot' for the bombardment of Stavanger aerodrome by a British cruiser. They left from a Scottish base in the early hours and reached the target area just before dawn. Then, on receipt of a pre-arranged signal from the cruiser, the Hudson flew over the airfield and dropped a flare and incendiary bombs. By good fortune the bombs fell among some enemy aircraft on the ground and the fires helped the cruiser to obtain the correct line and range. In spite of anti-aircraft fire which 'considerably enlivened the proceedings', the Hudson crew continued the task of spotting for the naval bombardment. They were attacked by a Junkers 88, but by skilful manoeuvring Tacon was able to avoid the enemy, complete his task, and return safely to base. Tacon, who had learned to fly in the evenings at the Hawke's Bay Aero Club, was with his squadron at the outbreak of war. His exploits during the Norwegian campaign marked the beginning of an outstanding career with **Coastal Command**.

The bombing attacks, minelaying, and reconnaissance patrols were continued throughout April. Aircraft from **Coastal Command** flew continuously over the North Sea and along the Norwegian coast reporting enemy movements and, as opportunity offered, attacking ships and targets inland. The crews of the Hudsons and Blenheims operating

from bases in **Scotland** had a gruelling time as they were also called upon to protect British naval forces and convoys in northern waters. Bomber Command directed its main effort against German-occupied airfields in **Norway** and **Denmark**, and there is evidence that these attacks caused a reduction in the scale of the enemy's bombing in the Aandalsnes and Namsos areas. In particular, little air interference was experienced by the Allied land forces during their evacuation, when heavy bombing attacks were maintained against German airfields on four successive nights. But meanwhile, owing to the distance they had to fly, and faced with an enemy air force superior in numbers and possessing bases in the area of combat, there was little that the squadrons of Coastal and Bomber Commands could do to aid the ground forces in contact with the enemy. Because of the limited range of its aircraft Fighter Command was unable to operate from **Britain**, but after the **Allied Expeditionary Force** landed an attempt was made to provide it with some support by sending fighters to operate from bases in **Norway**. Several New Zealanders were to play a distinguished part in these operations. On 21 April when No. 263 Gladiator Squadron was despatched to operate from the vicinity of Aandalsnes, the main Allied base, Flying Officer Vickery ¹ sailed with the advance party to advise on the preparation of landing grounds. Eventually a site was chosen at Lake Lesjeskogen, the surface of which was frozen. Then, in the face of enemy bombing of the jetty at Aandalsnes, and a shortage of both equipment and transport, petrol and ammunition dumps were established in the woods by the lake and the surface of the proposed landing ground cleared. On the evening of 24 April Pilot Officer Jacobsen ² was one of the 18 pilots who flew their Gladiators to this lake from the aircraft carrier *Glorious*. None of these men had ever taken off from a carrier before. Unfortunately, from the moment of its arrival the unit was thrown on to the defensive in the protection of its base from German bombing attacks, and this situation was further aggravated by a serious shortage of stores, equipment and spare parts, and of quick rearming and refuelling facilities. It was with such handicaps and against a background of snow and ice that the ill-equipped squadron

attempted to fight off the German bombers. Its pilots made a gallant, if brief, stand against overwhelming odds.

Shortly after daybreak next morning the Germans began bombing the frozen lake and continued to attack periodically all through the day until dusk. By midday the surface of the lake was pitted with bomb craters and ten of the Gladiators had been destroyed whilst waiting on the ice to be refuelled and rearmed—tasks which the pilots themselves had to undertake. During the afternoon the five aircraft still serviceable were flown to the landing area at Setnesmoen which had been prepared by the advance party. The next morning two more aircraft were lost, one by enemy action and the other by engine failure. That afternoon Jacobsen took off on patrol in the one remaining serviceable aircraft. He was twice in combat with Heinkels but in each case lost touch before he could complete his attack. The last flight of the day and the last before the squadron was ordered to return to **Britain** was again made by Jacobsen. He took off in the late afternoon in an unsuccessful attempt to intercept several enemy aircraft which were bombing the landing ground.

The return of the Gladiator squadron to **Britain** and the evacuation of Allied ground forces from central **Norway** virtually ended the struggle, except in the Narvik area where the Allies had

¹ Flying Officer H. E. Vickery; born **Invercargill**, 7 Sep 1913; joined **RAF** 1936; lost in sinking of carrier *Glorious* off **Norway**, 9 Jun 1940.

² Pilot Officer L. R. Jacobsen, DFC; born **Wellington**, 5 Mar 1915; joined **RAF** Oct 1938; lost in sinking of *Glorious*, 9 Jun 1940.

been fighting since the middle of April with some success. The delay in despatching fighter support to this area was mainly because of the need to prepare landing grounds at Bardufoss and Skaanland. The latter

was found soft and unsuitable for Hurricanes, so two squadrons were sent to Bardufoss. Nor was this airfield ideal, for the spring thaw caused extensive flooding. Here, on 21 May, No. 263 Squadron with a new complement of Gladiator aircraft flew off the aircraft carrier *Furious*; five days later it was followed by No. 46 Hurricane Squadron, brought out by the *Glorious*. Three New Zealanders were with these units. Jacobsen and Vickery were with No. 263 Squadron, while Flight Lieutenant Jameson ¹ was in command of a flight in No. 46 Squadron. Vickery had already done good work in supervising the construction of the airfield at Bardufoss.

The squadrons began patrols immediately, their main duty being to defend the fleet anchorage at Skaanland, the military base at Harstad and, where possible, to give close support to sea and land forces in contact with the enemy. Despite the absence of an air-raid warning system and the inadequate landing ground, the squadrons operated during the next few weeks with considerable success and gained a definite air superiority in that region. Two days after their arrival Jameson led a section of Hurricanes which found and destroyed two Dornier flying boats on the surface of Rombaks Fiord. These aircraft, which were carrying reinforcements and supplies to German ground forces in the Narvik area, were discovered after a flight over unfamiliar country, well concealed against the almost vertical side of a fiord. Although this made attack difficult, Jameson rearranged his formation, surprised the enemy, and set both aircraft on fire before they could retaliate. Reconnaissance an hour later showed that they had sunk. The following day Jameson destroyed a Junkers 88 which was one of three intercepted by his section south-east of Narvik. He afterwards reported:

I surprised the rearmost enemy aircraft by climbing up under his tail. On opening fire at 200 yards, a bright flash appeared from the 88 and my windscreen was obscured by oil. After breaking away, noticed black smoke was coming from his starboard engine. As I approached again he jettisoned his bombs so fired another burst at about 250 yards. The starboard engine began to burn and the fire gradually spread to the

fuselage. Shortly before the machine crashed on the cliff of a fiord, one of the crew jumped by parachute.

¹ Group Captain P. G. Jameson, DSO, DFC and bar, Norwegian War Cross, Silver Star (US), Order of Orange Nassau (Hol); **RAF**; born **Wellington**, 10 Nov 1912; joined **RAF** 1936; commanded No. 266 Sqdn, 1940–41; Wing Leader, Wittering, 1941–42, and North Weald, 1942–43; Planning Staff, No. 11 Fighter Group, 1943–44; commanded No. 122 Wing, 2nd TAF, 1944–45.

On the same day Jacobsen attacked a convoy of six German lorries on the north of Beis Fiord, setting two on fire and causing a number of casualties. Vickery also made several similar sorties attacking motor vehicles, railway stations, troops and strongpoints, including what was later found to be the German headquarters at Hundalen. On such missions the aircraft frequently sustained damage from enemy anti-aircraft fire and returned like lame ducks looking much the worse for wear and, as one pilot put it, ‘with odd bits fluttering or trailing in the breeze’. On 2 June Jacobsen had an eventful patrol during which he attacked four enemy bombers and shot down three of them, with the fourth probably destroyed. Here is his account of this notable engagement:

I was on patrol with another aircraft in the Narvik area along the railway to the Swedish border. Encountered two Ju. 88s and ordered my No. 2 to attack the second aircraft. I attacked the first from approximately 300 yards and attempted to close range, but enemy aircraft drew slowly away whilst diving. Chased him into **Sweden** and fired another two-second burst at approximately 400 yards, after which enemy machine disappeared into cloud. At this moment the other Ju. 88 crossed my path. After a two-second burst, the enemy dived vertically through cloud, apparently out of control. On following, I had great difficulty in avoiding crashing into mountain sides. Returning to Norwegian territory, I encountered many enemy aircraft low-flying in a wide sweep on Swedish border about Björn fjell. Engaged a Heinkel 111

which pulled up in a stall and dived into ground. On breaking away from this engagement, was attacked by one Junkers 88 and three Heinkels 111s from above and head on. Evaded this attack and positioned myself on another Heinkel 111 at which I fired a burst of three seconds from 250 yards below beam. Was then engaged head on by another Heinkel 111. By evasive tactics, managed to get a point-blank burst of three-seconds as the enemy machine broke away. It was last seen diving, apparently out of control. Now found myself inside a circle of enemy aircraft consisting of two Junkers 88s and six Heinkels 111s. Enemy aircraft again employed head on attack. Fire was also encountered from above and below. I was now using every possible device to evade enemy fire, but noticed that my aircraft had been hit in the engine, and that one of my flying wires had been shot away. After diving to avert collision, I positioned myself on a Heinkel 111 and fired approximately four-second burst. This caused enemy aircraft to rock violently and it was last seen gliding earthwards. On breaking off engagement I was subjected to fire from above and below. My engine was hit and oil tank evidently pierced as my windscreen became coated with black oil which made it impossible for me to see so I broke off engagement and used evasive tactics to avoid attacks which were now being made by four enemy aircraft from above. My engine was giving considerable trouble, but I managed to lose enemy aircraft and return to base. ¹

The tempo of action at this time can be judged from the fact that No. 263 Squadron flew over 390 sorties and was engaged in 72

¹ Three of the aircraft Jacobsen had attacked were later found crashed in [Sweden](#).

combats, while No. 46 Squadron made 249 sorties and had 26 combats. The Gladiators claimed 26 aircraft destroyed and the Hurricanes eleven.

Although the Allies captured Narvik on 28 May, the evacuation of northern [Norway](#) had already been decided upon because of the disasters

which had befallen the Allies in **Belgium**. Fighter protection was provided for the withdrawal of the ground forces on 7 June, and on this and the following day the twenty remaining aircraft were flown onto the carrier *Glorious* and the Bardufoss landing ground was destroyed. Actually orders had been received to destroy the Hurricanes as none of the pilots had previously landed on a carrier. However, following a successful test landing by Jameson and two other pilots, all the Hurricanes were flown on without loss. Unfortunately, the following day the *Glorious* was sunk by the German battle-cruisers, *Scharnhorst* and *Gneisenau*. Jameson and his commanding officer were the only survivors from the airmen who had embarked. They were picked up 120 miles off the coast by a small Norwegian merchant ship after spending three days on a Carley float. It was indeed an irony of fate that fighter pilots who had displayed such gallantry, both in their operations against the enemy and in salvaging their aircraft, should be lost during their evacuation to England.

The efforts of the **Royal Air Force** to strike at the enemy in **Norway** did not, however, cease with the withdrawal of the fighter squadrons and the British troops. Throughout the following months bombing attacks were made against enemy communications and airfields. Reconnaissance along the Norwegian coast and over the North Sea was also continued, with the double purpose of watching enemy shipping movements and observing developments in the Norwegian ports. New Zealand airmen continued to share in these tasks, which were carried out by aircraft of Bomber and Coastal Commands.

* * * * *

With startling swiftness the Germans followed their seizure of **Norway** by a violent onslaught on the **Netherlands**, **Belgium** and **France**. Novel methods of attack confused and bewildered the defenders and, within a few brief weeks, this blitzkrieg culminated in the evacuation of Allied forces from **Dunkirk** and the collapse of French resistance. The failure of the Allies to co-ordinate the efforts of their land and air forces prevented them from offering effective opposition to an enemy whose

unorthodox tactics and swift moves soon proved utterly disconcerting. With their greater mobility and superior armoured strength, the Germans were able to pierce fixed defence systems and then carry out a series of enveloping movements. As their ground forces swept forward they received full support from the **Luftwaffe, for the Germans had already developed methods of close co-operation between aircraft and the armoured columns such as had not yet been attempted by the Allies.**

The German attack opened in the early hours of 10 May 1940 with assaults on the frontiers of Luxembourg, **Holland and **Belgium**. Simultaneously parachutists and airborne forces landed at strategic points inside their borders, while airfields and communications both in these countries and in **France** were heavily bombed. The small Dutch and Belgian air forces were overwhelmed at the outset and the French Air Force suffered severely. Practically the whole available strength of the **Luftwaffe**¹ was thrown into the opening attacks in order to clear the way for the advance of the ground forces. By the end of the first day the Dutch defences were in confusion; the three main airfields at The Hague had been captured by airborne troops and transport aircraft landed after obstructions had been removed. In the **Rotterdam** area the important Moerdijk bridge was captured and held intact, and some 1200 airborne troops were landed at Waalhaven airfield before midday. Infantry were also brought in to **Rotterdam** by transport float planes. Elsewhere throughout **Holland** confusion was successfully spread by paratroops. Very quickly the power of the **Luftwaffe** achieved the desired result; in particular the savage bombing attack on the centre of the city of **Rotterdam** had an immediate demoralising effect, and on 15 May the Dutch army capitulated after five days' fighting. Meanwhile, in **Belgium**, German operations had gone according to plan. The capture of Fort Eben Emael was typical. Here 70 paratroops landed at dawn on the first day within the outer walls and, breaking up into small groups, began to force their way through the inner workings of this modern fortress. Reinforcements arrived by air and within twenty-four hours the demoralised garrison surrendered. Thus one of the most important forts of the Belgian defence line fell with only five casualties to the German**

paratroops. Other airborne operations in **Belgium** achieved similar success and most of the main bridges and roads were held for the advancing German armies. These now pressed forward in the Ardennes, feeling their way for the main armoured thrust.

¹ The air forces employed by the Germans included some 1300 bombers, including 350 dive-bombers and between 1200 and 1500 fighters. In addition they had about 450 transport aircraft and a similar number of reconnaissance machines. These forces were backed by a generous supply of replacement aircraft and crews, the latter fully and efficiently trained and of high morale.

Aerial reconnaissance gave the Germans an accurate picture of the Allied dispositions, and on 13 May their main armoured spearhead struck through Charleville and Sedan and crossed the Meuse. A strong effort was then made by the Luftwaffe in support of the advancing forces. Bombers, with strong fighter cover, attacked bases, troop concentrations, railway marshalling yards and movements of the Allied armies by road and rail, while French airfields were subjected to continual bombing. Strong dive-bomber forces were also employed to prepare the way for the armoured units. As soon as air reconnaissance or ground reports established that points of resistance were holding up the advance, a heavy concentration of air striking power would be called in. On occasion up to nine sorties were flown by single aircraft. As a result the British and French armies were paralysed to a degree that was a revelation to even the Germans themselves, and the legend of the dive-bomber grew.

From the outset the **Royal Air Force** in **France**, equipped with a handful of Hurricane fighters and a few squadrons of relatively obsolete Battles and Blenheims, attempted to reply to the enemy's massed air attacks and hinder the advance of his armoured columns. Both air and ground crews made an heroic effort against overwhelming odds, and the fact that it availed little detracts nothing from the many acts of gallantry performed. The support they could receive from the squadrons

based in the **United Kingdom** was limited by the distance involved and by the rapid dislocation of communications. Nevertheless aircraft from Bomber Command operated over the battle area from the first day, whilst fighters from forward airfields in **Kent** maintained patrols along the Belgian and Dutch coasts to the limit of their range. Three Hurricane squadrons were also sent to **France** as reinforcements on 10 May, and during the next few days, as calls for further assistance increased, more pilots and the equivalent of six squadrons were sent across the Channel. In addition, fighter aircraft were despatched each day to operate from bases on the Continent. But with the collapse of the Allied front and the loss of airfield facilities that followed the German bombing, it was considered unwise to strip **Britain's** defences further and commit the major resources of Fighter Command to the battle in **France**.¹ Later, however, as the battle in the north approached its climax, a maximum effort was made by all three Home Commands to cover the evacuation from Belgian and French ports.

¹ This historic decision, one of the most vital of the war, since it made possible the victory over **Britain** a few months later from which all else flowed, was not made until 19 May when complete collapse in **France** appeared inevitable. Even then it came only as a result of urgent representations by Sir Hugh Dowding, the C-in-C Fighter Command.

At the beginning of May 1940 there were 600 New Zealanders with the **Royal Air Force**, the majority flying with units of Bomber, Fighter, or Coastal Commands based in the **United Kingdom**. However, in **France** there was now a significant representation among the bomber units and in the fighter and reconnaissance squadrons, with a few men serving in administrative posts or on ground duties. Among the senior officers on the Continent were Group Captains Carr and Russell, both veterans of the First World War returning once more to their former battlefield. Two New Zealand medical officers were also with the **RAF** in **France** at this time. During the air operations of May and June 1940, 44 New Zealanders lost their lives. Fourteen were to receive awards for deeds of

gallantry in fighter and bomber attacks or for sterling service with the reconnaissance units, whose flights often involved penetrations at low level far behind the enemy lines, and which, in the case of the photographic unit, were made in unarmed aircraft.

From dawn on the first day of the German attack the fighter squadrons in **France were heavily engaged with the enemy formations. The Hurricanes covering the advance of the Allied Expeditionary Force into **Belgium** had many combats, while the two squadrons with the Advanced Air Striking Force in the south reported 'ceaseless activity' and 'a day crammed with incident'. In these initial encounters the British pilots exacted a heavy toll in proportion to the casualties they suffered, over forty German bombers being destroyed on the first day for the loss of ten Hurricanes in combat or through forced landings. Several New Zealanders were among those who reported successful engagements. Early in the day Flying Officer 'Cobber' Kain of No. 73 Squadron shot down one of nine Dornier 215s which he intercepted while on patrol over Metz. He dived on the enemy and singled out a Dornier for attack, but overshot. However, by turning quickly, he was able to attack and shoot down another bomber in the formation. Two other New Zealanders in the thick of the air fighting on 10 May were Pilot Officers Dini ¹ and Saunders. ² Dini was flying with No. 607 Squadron which had only just exchanged its Gladiators for Hurricanes. In three attacks on enemy bombers he was able to claim one Heinkel destroyed and two possibles. His first encounter took place near Lille when, after an initial burst, the enemy machine 'emitted a cloud of oil and smoke and was last seen diving towards the ground.' Shortly afterwards he**

¹ Pilot Officer A. S. Dini; born **Christchurch**, 7 Jan 1918; joined **RAF** Mar 1938 killed in flying accident, 31 May 1940.

² Pilot Officer G. C. Saunders; born **Wellington**, 21 Dec 1916; joined **RAF** Oct 1938; killed on air operations, 14 May 1940.

was on patrol with another pilot from his squadron when they intercepted seven Heinkels over Audenarde. Dini attacked the last aircraft of the formation and saw it fall away and crash in flames. His third encounter of the day took place in the evening, when he intercepted three Heinkels near Douai. Smoke poured from both engines of the machine he attacked, but oil on the windscreen of his Hurricane prevented observation of its fate. Saunders, flying with No. 87 Hurricane Squadron based near Lille, gained his first victory in an engagement with six bombers over Thionville. A shower of debris fell away from one enemy machine after his first burst; it then dropped out of formation and went into a steep dive. Saunders renewed his attack but came under severe fire from the remaining bombers. He managed to put a long burst into one of them and then saw it break away and fall, apparently out of control. Shortly afterwards the radiator of his Hurricane collapsed and Saunders was temporarily blinded with glycol, but he was able to return safely to his aerodrome. A few days later he was shot down while attacking a formation of bombers heavily escorted by fighters. Another pilot to score a success on the first day of the German attack was Flight Lieutenant Malfroy,¹ who was with one of three reinforcement squadrons of Hurricanes sent from England during the afternoon of 10 May. Immediately upon their arrival in **France** these squadrons found themselves in the very thick of the fray, and before darkness fell Malfroy's squadron had accounted for six of the enemy. His own victim was a Heinkel 111, one of a formation intercepted near Bethonville, east of Rheims.

The days which followed were equally active and the fighter pilots were called upon to perform feats of endurance that taxed their physical strength to the limit. Because of the small number of aircraft available they had to fulfil a triple role—escorting bombers, attacking enemy columns on the move, and defending their own areas from attack. New Zealand pilots had further successes in the course of these patrols, Kain in particular displaying remarkable skill in combat and establishing himself as an outstanding pilot. On 11 May he destroyed a Dornier 215, his Hurricane being damaged during the combat. The next day, while

escorting bombers to attack enemy convoys, he shot down a Henschel 126 and saw it crash near Bouillon. On the 14th Flying Officer Stratton destroyed a Junkers 87 in a combat, during which

¹ Wing Commander C. E. Malfroy, DFC, DFC (US); born Hokitika, 21 Jan 1909; Cambridge University Air Squadron, 1931–32; entered RAF Aug 1939; commanded No. 417 Sqdn, 1941; No. 66 Sqdn, 1942; CFI, No. 61 OTU, 1942; Training Staff No. 10 Fighter Group, 1942–43; Wing Leader, Exeter, 1943–44; commanded No. 145 airfield, 1944; Staff duties, AEAFF and SHAEF, 1944; commanded RAF Station Portreath, 1944, and RAF Station, Warmwell, 1945.

his squadron drew ‘the unwelcome attention of hordes of Messerschmitts’. This was over Sedan, the scene of many bitter air battles. Here the Germans were operating large numbers of bombers, many formations being heavily escorted by fighters, so that the Hurricane pilots almost invariably fought against heavy odds. Yet they frequently clawed down their opponents at the rate of three or four to one.

Typical of the aggressive spirit which the British airmen continued to display was Pilot Officer Simpson’s ¹ engagement with a Messerschmitt 110 on 18 May. After attacking with a long burst, Simpson saw the Messerschmitt make a sudden turn and dive towards the ground, so he broke away. But the enemy recovered and made off over the treetops. Simpson gave chase and after a long pursuit, during which he exhausted all his ammunition, was rewarded by seeing his quarry hit the ground and break up. The following day Kain scored a further success while flying with his squadron as escort to Allied bombers detailed to attack German columns north of the Aisne. On the way to this target enemy bombers were sighted, with three formations of Messerschmitts flying high above them. The Hurricanes set about the bombers, Kain getting a burst into a Junkers 88 in a head-on attack. He then turned and attacked the same machine from the rear and saw it plunge earthwards. The German fighters now dived to join in the fray and Kain fired on one of them, a Messerschmitt 110, as it emerged from

a cloud. The enemy machine turned over and spiralled down into the clouds below, black smoke pouring from it. Altogether in this engagement the Hurricanes claimed seven bombers and one fighter for the loss of three of their own formation. Earlier on the same day Flying Officer Ward,² flying in a section of four Hurricanes, was responsible for the destruction of a Henschel 126 intercepted near Valenciennes. After one of his section had attacked without result, Ward followed and got in several good bursts. As he broke away smoke began to pour from the German machine. He then closed and made a second attack, whereupon the enemy aircraft blew up in the air. Ward had arrived in **France** only two days previously in company with five other pilots to deliver new aircraft to No. 87 Squadron. On hearing how sorely pressed the unit was at the time, the ferry pilots, who had no definite orders, elected to remain in **France**. They went into action immediately and took part in the many tasks the squadron was called upon to perform. Only two of the six—one being Ward—lived to return to England.

¹ Flying Officer G. M. Simpson; born **Christchurch**, 22 Jun 1919; joined RAF Oct 1938; killed on air operations, 26 Oct 1940.

² Squadron Leader D. H. Ward, DFC and bar; born **Whangarei**, 31 Jul 1917; joined **RAF** Jun 1938; commanded No. 73 Sqdn, **Middle East**, 1941–42; killed on air operations, 17 Jun 1942.

The strain of conflict was now becoming severe as the fighter squadrons were subjected to increasing pressure from German fighters over the airfields in **France**. Frequent bombing attacks on these bases also demanded that considerable effort be expended in defending them. Enemy air operations, on the other hand, were wholly offensive and increasingly effective in disrupting the Allied defences. Nevertheless the fighter pilots continued to fly intensively on interception patrols and operated from forward airfields until the last possible moment. On one occasion a flight of Hurricanes returning from patrol were about to land at their advanced landing ground when they were frantically waved away

by men on the ground. Somewhat puzzled, the pilots opened up their engines and went round again to find a column of German tanks moving up to the airfield.

Throughout this first week of the campaign the British bomber squadrons in **France** attempted to reply to the enemy's air attacks and delay the advance of his ground forces. In doing so they suffered heavy losses. This was particularly the case with the Battle squadrons which were at first employed on low-level operations. It was considered that this form of attack would render them less vulnerable to the enemy's fighters, but the fact that the German columns were well equipped with anti-aircraft guns had not been realised. Thirteen out of 32 Battles were lost in one attack on the first day. On the following day, of eight despatched all failed to return. It was not long before nearly half the small group of New Zealand airmen serving with these units had been posted missing on operations. The Battle aircraft was already obsolescent before the campaign began. It was virtually defenceless from the rear and its speed quite insufficient for evasion when attacked by fighters or exposed to accurate fire from the ground. On 12 May an attempt was made to check the German advance towards **Brussels** by bombing road junctions and bridges over the Albert Canal near Maastricht, but only one of the five Battles despatched survived and it was badly damaged. Of 24 Blenheims which took off from English bases to make an attack on similar targets in Maastricht itself, ten were lost. Both formations not only encountered severe anti-aircraft fire in the target area but were also heavily assailed by enemy fighters. Three of the missing aircraft were captained by New Zealanders, Flying Officer Bassett ¹ and Pilot Officers

¹ Flying Officer T. G. Bassett; born Te Kopuru, 12 Oct 1917; joined **RAF** Jun 1938 killed on air operations, 12 May 1940.

Frankish ¹ and Keedwell. ² Among those who returned safely was Flying Officer Trent, ³ who led a section of Blenheims in the attack.

Heavier bombers, based in the **United Kingdom**, were also operating over the battle area from the beginning of the campaign. Their first attack was launched on the night of 10 May against the important Dutch airfield at Waalhaven, near **Rotterdam**, and three Wellingtons from No. 75 New Zealand Squadron were among the 36 aircraft detailed. Crews reported hits on buildings as well as on the aerodrome itself, and the Dutch were able to recapture Waalhaven for a short period the following morning. During the next four days and nights New Zealand airmen were among the crews of the small formations of Blenheims and Wellingtons which flew from England to attack enemy columns, bridges and road junctions, Wellingtons from No. 75 Squadron operating on two nights against such targets without loss. But the bombing attacks were insufficient to hinder the rapid advance of the enemy. By 14 May pressure against the Allied forces in **Belgium** was increasing while, farther south, the situation in the area round Sedan was deteriorating rapidly. Here was the most serious of the penetrations the enemy had made in the Allied lines. Powerful armoured forces had broken through weak French defences north of the Maginot Line, crossed the Meuse and made their way into open country, where they met with practically no opposition.

On the afternoon of 14 May a large-scale attack by some seventy bombers based in **France** was launched against bridges and roads near Sedan. Throughout their flight the Battles and Blenheims were harried by enemy fighters and at least forty were shot down, some of them before they reached the target area. Pilot Officer Cunningham ⁴ lost his life while making a gallant attempt to machine-gun a bridgehead. Pilot Officer Oakley ⁵ was also shot down but managed to escape with minor injuries and was flying again with his squadron on the following day. A third New Zealander, Flying Officer Fitzgerald, ⁶ although wounded, carried out a daring low-level attack, was badly shot up and crash-landed. The enemy had

¹ Pilot Officer C. R. Frankish; born **Wanganui**, 17 Dec 1914; joined **RAF** Jan 1938; killed on air operations, 12 May 1940.

² Pilot Officer O. H. Keedwell; born **Levin**, 10 Jun 1913; joined **RAF** Oct 1938; killed on air operations, 12 May 1940.

³ Squadron Leader L. H. Trent, VC, DFC; **RAF**; born **Nelson**, 14 Apr 1915; joined **RAF** Aug 1938; p.w. 3 May 1943.

⁴ Pilot Officer V. A. Cunningham; born **Wellington**, 24 Apr 1916; joined **RAF** Aug 1939; killed on air operations, 14 May 1940.

⁵ Flight Lieutenant H. L. Oakley; **Birmingham**, England; born **Ashburton**, 6 May 1917; joined **RAF** Aug 1939; transferred **RNZAF** Aug 1943.

⁶ Wing Commander T. B. Fitzgerald, DFC; **RNZAF**; **Wellington**; born **Timaru**, 11 Jul 1919; joined **RNZAF** Jun 1937; transferred **RAF** Jun 1938; test pilot, Hawker Aircraft Ltd., 1942; test pilot, De Havilland Aircraft Company Ltd., 1943–44; Wing Leader, Coltishall 1944; Admin duties, HQ 2nd TAF, 1945.

been quick to establish an effective fighter and anti-aircraft defence over the whole area round Sedan. As a result, the bombing attacks succeeded in halting the German advance only for a few hours.

During the next few days the whole situation changed rapidly. The German armoured forces poured through the widening gap at Sedan and advanced westward towards the valley of the **Somme** and the Channel ports. Further north, the Allied forces in **Belgium** began their withdrawal, abandoning **Brussels** and Antwerp. With the enemy's rapid advance and his bombing of landing grounds, the air forces in **France** were forced to retire to less vulnerable positions in the rear, and from this time onwards a succession of moves, combined with failing communications and supplies, had their effect on operations from bases on the Continent. ¹ In addition, the roads were crowded with refugees, making it difficult to distinguish friend from foe. The presence of these

refugees on the roads did, however, make it easier for airmen who were shot down to return to their units. One New Zealand pilot, who baled out over **Belgium** after being attacked by a swarm of Messerschmitts, landed near some German tanks. He hid in a wood for some time, then got old clothes from a farmhouse and eventually, after 'dodging about for eight days', as he put it, joined a refugee column with which he remained for a further week. At last a lorry gave him a lift to the vicinity of the airfield where his squadron was based, and he arrived back just in time to join in the retreat before the airfield was captured. Another New Zealander, shot down after a combat in which he had accounted for at least one of his assailants, found himself far behind the German lines. A Belgian gave him clothes in which he disguised himself as a peasant refugee. For ten days he moved across country towards the German front, which he passed by crawling through long grass and swimming a canal. Occasionally he obtained food and shelter at a farmhouse or cottage and finally reached **Dunkirk**, only to be arrested by the French. He managed to establish his true identity, however, and got back to England in a motor torpedo-boat. On rejoining his squadron he found that he had been listed as killed and his affairs wound up. Even a forced landing in **France** could be a hazardous business; one bomber pilot writes of 'spending a bad hour with a farmer who brandished a shot gun', before he was identified and rescued by a member of his squadron.

Despite the adverse conditions under which they now operated, the squadrons in **France** continued to fly an amazing number of

¹ One squadron record contains the following note: Once again the squadron packed up.... The convoy arrived after a hectic journey minus the ration lorry which had been struck by a bomb during the night. Eventually we established ourselves in tents in a forest alongside the airfield which was very boggy in patches.'

sorties. The bombers, flying at a higher level, attacked bridges, troop concentrations and armoured vehicles in a gallant effort to stem the

German advance. On 26 May Flying Officer Vernon,¹ who was with No. 150 Battle Squadron, led a particularly daring attack on a German headquarters at a chateau near Recogne, in **Belgium**. In the vicinity of the target the formation he was leading lost touch while flying through a storm, but Vernon went on to locate and bomb his objective. On the return flight he was attacked by six Messerschmitts, but by skilful flying he evaded their initial attacks and his gunner was able to shoot down one Messerschmitt and set fire to another. However, the remaining fighters continued to attack and seriously damaged the British bomber. With its engine failing, the Battle began to lose height rapidly and Vernon was forced to land in enemy territory. He assisted his wounded crew from the aircraft and set it on fire. A German patrol approached and took the wounded men prisoner, but Vernon managed to escape, reach the French lines, and make his way back to his unit. A fortnight later he was lost while making a low-level attack on a German convoy.

Wellingtons, Whitleys, and Blenheims continued to operate from the **United Kingdom**, although the effort of these home-based forces was now partly directed against communications and oil targets in **Germany**. There was some disagreement at this time as to whether the heavier bombers should be employed in a strategic or tactical role, but eventually the critical situation which developed in the north forced their employment more in close-support operations during the remainder of the campaign.² At first, Wellingtons from No. 75 New Zealand Squadron carried out each type of operation. On the night of 15 May, six of these aircraft formed part of the force which made the first bombing raid on objectives in **Germany**. It was aimed primarily at oil plants in the Ruhr, but unfortunately bad visibility prevented the majority of the bombers from identifying and attacking these installations.³ Two nights later the squadron again provided six aircraft, this time as part of a force of 50 bombers detailed to attack objectives in the Ruhr and

¹ Flying Officer J. E. Vernon, DFC; born Roxburgh, 21 Aug 1915; joined RAF Aug 1938; killed on air operations, 7 Jun 1940.

² Although it had been previously decided that, in the event of a German attack in the West, Bomber Command should attack oil targets in the Ruhr, the opening days of the German offensive witnessed much debate on these matters. The British Air Staff were of the opinion that the role of the heavier bomber was a strategic one, i.e., the attack on German industry and communications, and they were anxious to conserve their slender force of these aircraft for this purpose. However, at this period the relative power of the opposing air forces was so disproportionate that the employment of the British bomber force, in whatever form, would not have redressed the adverse balance which had been struck upon the ground.

³ The difficulty of identifying towns, let alone individual factories, in the smoke-laden Ruhr, had yet to be realised.

river crossings at Namur, Dinant and Givet. Again cloud rendered recognition of the targets uncertain, although the six Wellingtons were among the aircraft which reported having made attacks. For the rest of the month the majority of the 43 sorties despatched by No. 75 Squadron were, along with the general effort of Bomber Command, in support of the hard-pressed ground forces. On the night of 19 May one of the objectives was the forests around Fumay and Bouillon where the enemy had concentrated fuel and ammunition supplies. Eleven Wellingtons, seven of them from the New Zealand Squadron, were given the task of setting these forests alight. All the crews located the target and, attacking with both incendiaries and high explosives, succeeded in starting many fires. There was considerable opposition from anti-aircraft batteries in the target area and many of the bombers were hit; one Wellington from No. 75 Squadron had a shell pass right through it without exploding. All returned safely. Subsequent targets for the bombers included the Meuse crossings, railway and road junctions, bridges, troop concentrations and points of congestion close behind the enemy lines. Similar objectives in the north were also bombed by units of **Coastal Command** based in south-east England, with which a small group of New Zealand airmen were flying. From the commencement of

the campaign these squadrons had been called upon to supplement the operations of the other commands against the enemy's advances in **Holland** and **Belgium**. They were also employed in protecting supply ships crossing the Channel.

By 20 May the situation on the Continent was critical. The enemy had widened the breach at Sedan and the advance of his columns beyond Cambrai towards Arras now threatened the rear of the Allied armies in **Belgium**. In fact the forces in the north of the German irruption were, as the enemy raced towards the Channel coast, increasingly cut off from those in the south. By the 22nd this severance was complete. The Germans then exerted maximum pressure on the land forces in **Belgium** and within a few days it became clear that retirement on **Dunkirk** and evacuation from that port was the best that could be hoped for the Allies in the north.

Throughout those crowded days of the last week of May 1940, when Belgian resistance collapsed and the armies in the north fought doggedly to hold **Dunkirk** and its perimeter, the British air squadrons made strenuous efforts to stem the German advance and to beat off the attacks of the **Luftwaffe** on the bridgehead. Following the withdrawal of the majority of the fighter squadrons from **France** on 22 May, fighter patrols over the northern battle area had to be flown from airfields in England, but in spite of this handicap the British squadrons continued to give battle, and indeed, as the main strength of the home-based fighter units was thrown in, the **Luftwaffe** began to falter. In particular the appearance over **Belgium** of new British aircraft, such as the Spitfire and Defiant, had a most disconcerting effect on the German airmen, and, on more than one occasion, an enemy formation jettisoned its bombs and fled at the sight of a few Spitfires. 'Now for the first time,' noted General Halder in his diary on 24 May, 'enemy air superiority has been reported by Kleist.' And on the same day the War Diary of the German 19 Corps recorded: 'Enemy fighter resistance is so strong that our own air reconnaissance was practically impossible.'

It was during this period of intensive air activity that many fighter

pilots first saw action against the enemy. Men who had come eagerly to Fighter Command and spent long months in training, yearning all the while for combat, were now given the opportunity of showing their mettle and matching their skill against that of the German pilots. ¹

Among the New Zealanders who reported successful engagements during the third week of May were Flight Lieutenants F. N. Clouston ² and W. G. Clouston, ³ Pilot Officers Deere ⁴ and Gray, ⁵ Flying Officer Brinsden, ⁶ and Pilot Officers Cobden, ⁷ Gibson, ⁸ Newton, ⁹ Trousdale, ¹⁰ and Yule. ¹¹ Sometimes successes were shared

¹ Shortly afterwards one New Zealander wrote home: 'When the Germans invaded **Belgium** and **France** no one in my Squadron had seen a German aircraft, much less been in action against one. We'd had plenty of flying but it wasn't very different from peace-time flying. Like a lot of others we were just waiting to get our chance. We didn't have to wait long!'

² Flight Lieutenant F. N. Clouston; born **Motueka**, 27 Jan 1913; joined RAF Aug 1938; killed on air operations, 29 May 1940.

³ Wing Commander W. G. Clouston, DFC; **RAF**; born **Auckland**, 15 Jan 1916; joined **RAF** 1936; commanded No. 258 Sqdn, 1940–41; No. 488 (NZ) Sqdn, 1941–42; p.w. (**Singapore**) Feb 1942.

⁴ Wing Commander A. C. Deere, DSO, OBE, DFC and bar, DFC (US), Croix de Guerre (Fr); **RAF**; born **Auckland**, 12 Dec 1917; joined **RAF** 1937; commanded No. 602 Sqdn, 1941; Wing Leader, Biggin Hill, 1943; Wing Commander No. 84 Group, 1944–45; commanded RAF Station, Duxford, 1945–46; Air Staff, **Malta**, 1948–49; commanded RAF Station, North Weald, 1952-.

⁵ Wing Commander C. F. Gray, DSO, DFC and two bars; **RAF**; born **Christchurch**, 9 Nov 1914; joined **RAF** Jan 1939; commanded Nos. 403, 616, 64 and 81 Squadrons, 1941–43; Wing

Leader, **Malta, Sicily and Europe**, 1943–45; commanded RAF Station, Skeabrae, 1945; Directorate of Air Foreign Liaison, 1947–49; British Joint Services Mission, **Washington**, 1949–.

⁶ Wing Commander F. N. Brinsden; **RAF**; born Takapuna, 27 Mar 1919; joined **RAF** 1937; transferred **RNZAF** Jan 1944; p.w. 19 Aug 1943; retransferred **RAF**, 1947.

⁷ Pilot Officer D. G. Cobden; born **Christchurch**, 11 Aug 1914; joined **RAF** Aug 1938; killed on air operations, 11 Aug 1940.

⁸ Squadron Leader J. A. A. Gibson, DSO, DFC; **Auckland**; born **Christchurch**, 24 Aug 1916; joined **RAF** May 1938; commanded No. 15 (**RNZAF**) Sqdn, 1943–44.

⁹ Flying Officer K. E. Newton; born **London**, 24 Sep 1915; joined **RAF** Jun 1938; killed on air operations, 28 Jun 1940.

¹⁰ Wing Commander R. M. Trousdale, DFC and bar; born **Auckland**, 23 Jan 1921; joined **RAF** Mar 1939; transferred **RNZAF** Jan 1945; commanded No. 488 (NZ) Sqdn, 1942–43; killed in aircraft accident, 16 Jun 1947.

¹¹ Wing Commander R. D. Yule, DSO, DFC and bar; **RAF**; born **Invercargill**, 29 Jan 1920; Cranwell Cadet, 1938–39; permanent commission **RAF** Oct 1939; commanded No. 66 Sqdn, 1942; Wing Leader, No. 15 Wing, 1943–44.

with other members of a formation, but more often they were individual efforts. On 18 May Yule was on patrol over **Belgium** with a flight of three Hurricanes when they intercepted twelve Heinkel bombers flying through broken cloud. They followed the formation through and attacked when it came out into a clear patch. Yule saw the Heinkel he selected crash to earth. A few days later F. N. Clouston was leading his Hurricane squadron over the battle area when they encountered a swarm

of Messerschmitts and a series of dogfights developed. Clouston saw a cloud of smoke and steam pour from the side of the first machine he attacked. The second dived into the edge of a small wood. About the same time his namesake, W. G. Clouston, scored a double success. He was leading a section of his squadron on patrol over **Dunkirk** and Calais when they met two formations of dive-bombers, about twenty in all, escorted by some thirty fighters. Clouston went for the dive-bombers. His first target turned slowly on its back and dived into the sea. In an attack on a second Junkers he experienced severe crossfire, but saw pieces fall off the enemy machine which then burst into flames.

Flying with another section of his squadron on the same patrol was Flying Officer Brinsden. When about to join combat he saw Clouston's first victim go into the sea. A few seconds later he was able to send another dive-bomber hurtling after it. Deere scored a first double success in more unusual circumstances on 23 May. He was one of two Spitfire pilots detailed to escort a Miles Master—a two-seater training aircraft—that was attempting to rescue a British pilot forced down at Calais-Marck, an airfield which by this time was in no-man's-land. The three aircraft reached this airfield without incident, but just as the trainer was taking off with its passenger, Deere's companion shouted over the radio-telephone that Messerschmitts were approaching. Almost at the same moment one of them dived on the Master but overshot. Deere at once turned on the Messerschmitt and fired two short bursts. It carried on for a short distance then crashed into the sea a few yards from the shore, where its tail remained sticking up out of the water for some months afterwards. He then set about another German fighter which turned over on its back and crashed in Calais itself. An attack on a third Messerschmitt found Deere with his ammunition exhausted so he made for the nearest cloud and returned safely across the Channel. Meanwhile, the training aircraft and Deere's companion, who had destroyed at least one other German fighter, had also made good their escape.

On the following day Deere's No. 54 Squadron, with which Gray was also flying, experienced its first big air battle when it engaged two large

bomber formations escorted by Messerschmitts. In the many dogfights which followed nine German aircraft were claimed destroyed, with an additional four probables. Of these Deere was credited with one Messerschmitt destroyed and Gray with a probable, in what was his first combat. The next day Gray shared in the destruction of another Messerschmitt whilst escorting Allied bombers over Gravelines, but his Spitfire was badly damaged by fire both from enemy aircraft and the ground. Deere had a similar experience the following morning while escorting ammunition ships into **Dunkirk**. His section of Spitfires engaged some twenty Messerschmitts and in the resulting mêlée he had his port wing partly shot away. However, he was able to claim two of the enemy before breaking away to limp home. He afterwards reported tersely:

We saw enemy bombers attacking destroyers off Calais. On going into attack, we were in turn set upon by Messerschmitts 110s. Shot one down in flames after three bursts but immediately became sandwiched between two more, experiencing considerable fire. Steep turned and got on the tail of one of them and after three short bursts, both his engines commenced smoking and, losing height rapidly, he prepared to land north of Calais.

While the air battles continued, the Allied forces in the north were being compelled to give ground. In spite of a dogged defence, Calais fell on 26 May and the evacuation from **Dunkirk** began that evening. During the next seven days ships of the **Royal Navy**, assisted by small craft of all kinds, plied back and forth across the Channel carrying the battle-worn troops of the British Expeditionary Force to England. All the time the Germans were pressing in upon the narrow exit from the east and from the west, while the main effort of the **Luftwaffe** was turned against **Dunkirk**, its beaches and the crowded ships. Bombers and dive-bombers, with their attendant fighters, were thrown in to the fullest extent that local airfields and supplies permitted. To frustrate these attempts to prevent the evacuation, the squadrons of the **Royal Air Force** now concentrated upon protecting the **Dunkirk** area and covering the

Channel crossing, while the town of [Dunkirk](#) itself, covered by a great pall of black smoke from burning oil depots and abandoned equipment, formed a sombre background to the struggle on land and in the air.

Throughout these grim and desperate days Bomber Command Wellingtons and Blenheims gave valuable assistance to the ground forces striving to prevent the enemy from reaching the beaches. No. 75 Squadron made nine attacks and crews reported good results on each occasion. Meanwhile the Ansons and Hudsons of Coastal Command were busy protecting the stream of small craft making their way to the English coast. They also searched for the helpless —the crowded lifeboats, the men drifting on rafts or in the sea— and, having found them, directed ships to their rescue. But it was inevitable that the main burden of protecting the evacuation should fall upon the fighter squadrons. How well they acquitted themselves in this task is best indicated by the heavy losses they inflicted on the enemy. During the period 27 May to 3 June the Germans, according to their own records, lost 189 aircraft, while British losses during the same period were 131 machines of which 99 were fighters. As the Commander-in-Chief of the [British Expeditionary Force](#) afterwards reported: ‘The embarkation of the force would have been well-nigh impossible but for the fighter protection provided.’

The fighter patrols over [Dunkirk](#) were controlled by No. 11 Fighter Group, which at this time was under Air Vice-Marshal Park. He was now 48 years of age and was just recovering from a serious operation. Nevertheless, he was not content to direct the battle from England but flew his Hurricane over [Dunkirk](#) to study the situation which had developed. On his return he urged that patrols in greater strength be flown over the evacuation area, but the problem was how to meet the conflicting demands of strength and continuity and yet conserve the slender fighter force for the great trial of strength over [Britain](#) which was impending. These considerations had restricted the first patrols over [Dunkirk](#) to single squadrons, with consequent heavier losses in combat. After strong and repeated representations Park was able to employ

patrols of two squadron strength, and although this meant leaving short periods during which there was no air cover, casualties were reduced and there was a marked increase in the number of successful combats. The British squadrons were able to break up many of the enemy formations and thus mitigate the intensity of the bombing attacks on the points of embarkation. Inevitably many of the combats took place out of sight of the troops on the beaches, so that the effect of this intervention was not fully realised at the time. Yet fighter Command did succeed in achieving a large measure of air superiority over **Dunkirk**, and in so doing scored a notable victory over the hitherto all-conquering **Luftwaffe**. A few days later, in the course of one of his characteristic speeches of those days, Winston Churchill declared:

Wars are not won by evacuations. But there was a victory inside this deliverance which should be noted. It was gained by the **Air Force**. Many of our soldiers coming back have not seen the **Air Force** at work; they saw only the bombers which escaped its protective attack. They underrate its achievements There was a great trial of strength between the British and German air forces.... They tried hard but they were beaten back; they were frustrated in their task.

Many of the New Zealand fighter pilots who took part in the **Dunkirk** patrols scored successes against the enemy. Several had remarkable escapes. One day Flying Officer Ward had his Hurricane badly damaged in combat over **Belgium**. The gun sights were shot away and his starboard petrol tank was leaking, so he decided to land on a French aerodrome and refuel before returning across the Channel. But just as he began to glide down he saw two Dorniers begin a dive-bombing attack on the airfield he intended to use. Ward dived on the tail of one of them and gave it two short bursts, hitting it despite the absence of gun sights. The second Dornier escaped into cloud. Again he prepared to land but was almost at once attacked by German fighters. However, after some sharp evasive action he managed to get down. The damaged tank was now spurting petrol and the ground staff refused to refuel his aircraft as they regarded it as suicidal for him to fly the machine in that condition.

Ward then seized a bayonet and opened out the holes in the leaking tank, emptying it, and then had the other filled. With insufficient ammunition or petrol for further combat he took off for England, only to run into a formation of six Messerschmitts a few moments later. He gave the leader a burst as he came down head-on, then dived to escape further attack and returned safely across the Channel. ¹

On 28 May Deere was leading his squadron on their fourth patrol of the day when they encountered 17 Dorniers. In the engagement which followed, return fire from one of these aircraft hit the oil system of his Spitfire, and while Deere was half blinded by smoke from the burning oil his engine seized. He was then flying at barely 800 feet over the Belgian coast between Nieuport and **Dunkirk**, so he made for a stretch of beach along which his Spitfire slithered, finally coming to rest on its nose. Although injured in the head Deere scrambled out of his aircraft, set it on fire, and began to make his way on foot towards **Dunkirk**. After a hazardous and eventful journey, partly made by converting abandoned cars to his own use, he finally reached that port and returned by ship to England.

On the same day Pilot Officer Newton, after destroying a Messerschmitt in a whirlwind combat, had his Spitfire badly damaged in a further encounter and was forced to bale out over the sea. He was picked up by a hospital ship bound for **Dunkirk**, and although bombed and machine-gunned during that night, it got back to England the next day and Newton returned safely to his squadron. A similar experience befell Squadron Leader McGregor a few days later. His Hurricane was badly shot up whilst he was leading his

¹ Unlike many fighter pilots, Ward was not superstitious. His Hurricane bore a coat of arms of his own designing—a shield, quartered, bearing a broken hand-mirror, a hand holding a match lighting three cigarettes, a man walking under a ladder the figure 13, and under the shield the motto: ‘So what the hell.’

squadron against a large formation of German aircraft and he was forced to land in the sea. By a most fortunate chance he was picked up by a ship returning to **Dover**.

During the last days of May the tempo of action increased considerably as the Germans intensified their attacks on the area around **Dunkirk**. Formations of dive-bombers, heavily escorted by fighters, were sent to attack the port and the beaches, the ships and the troops who were fighting fiercely to hold the shrinking perimeter. But, throughout each day, fighter patrols took off from airfields in the south-east of England in an effort to supply continuous cover over the **Dunkirk** area. Frequent interceptions of enemy formations led to short, sharp battles in which the air momentarily filled with whirling aircraft and the sky resounded with the crackle of machine-gun fire. Occasionally a smoke-trailing aircraft crashed into the sea. But the engagements seldom lasted more than a few minutes, except perhaps for the relentless pursuit of a damaged machine. The short endurance of the fighter aircraft was a limiting factor, as in combat fuel was consumed at an alarming rate. Typical of the brief encounters which took place was that which occurred early in the morning of 1 June. A squadron of Spitfires was on patrol over **Dunkirk** when a formation of some twenty-five German fighters was sighted. Although outnumbered by over two to one, the Spitfires went straight into the attack. A 'free for all' quickly developed during which friend and foe became involved in a swirling mass of machines. The performance of the Spitfire surprised the Germans, and the British pilots accounted for at least six of the enemy for the loss of only one of their number. Flight Lieutenant W. G. Clouston was leading a section of this squadron. After attacking one Messerschmitt he saw another come out of cloud just ahead, so he turned and set about it. Tracer entered the enemy machine, which pulled up into a steep climb and then went down in a spiral dive. A moment later he singled out another Messerschmitt and closed in, firing all the time. The enemy stalled and went into a spin from which it failed to recover. On the same day Flight Lieutenant Mowat ¹ was flying with a Hurricane squadron on patrol near **Dunkirk** when they sighted 'a mass

formation of bombers escorted by Messerschmitts. The squadron went into attack and a general dog-fight followed' In the course of this engagement Mowat attacked one Messerschmitt, which tried to evade by making steep dives and turns. He closed in, firing short bursts, and saw pieces fall off the enemy machine as it went down in a vertical

¹ Wing Commander N. J. Mowat, DSO; born **Oamaru**, 18 Sep 1914; joined **RAF** Mar 1939; transferred **RNZAF** Jan 1945; commanded No. 607 Sqdn, 1941-42; No. 166 Wing, **India**, 1942-43; held various appointments **India** and ACSEA, 1943-44; commanded RAF Station, Peterhead, 1944-45; killed in flying accident, 7 Nov 1946.

dive. Pilot Officer Trousdale was with a flight of Spitfires which sighted seven Messerschmitts circling below them. They immediately dived to attack. Trousdale got on the tail of one of them and opened fire. Smoke poured from the enemy machine, which spiralled down out of control.

Such were the engagements in which the fighter pilots were involved as again and again they returned to the battle area to challenge the **Luftwaffe** and make their contribution to the salvation of the thousands of men on the beaches below. Their efforts were not in vain, for the evacuation was succeeding beyond all expectations. ¹ The harbour and approaches to **Dunkirk** and its neighbouring beaches were thick with craft of every kind, and as the battle continued on land and in the air above, the troops boarded their boats in orderly fashion. Some carried Bren guns which they tied to the rigging and used as anti-aircraft weapons. Others fired their rifles in defiance as the German aircraft swooped down on them. Ships were battered or sunk and there were casualties; but repeatedly, as the waves of bombers came over to attack, the British fighters broke in among them and drove them off or marred their aim so that their bombs fell harmlessly into the sea.

The protective patrols were continued until 4 June, by which time some 336,000 British and French troops had been disembarked in the

south-eastern ports of England. On that day Admiral Ramsay, ² who was in command of the operation, addressed the following message to the Commanders-in-Chief of Fighter, Bomber, and Coastal Commands:

I and the forces under my command who have been engaged on the evacuation of the Allied Armies owe a deep debt of gratitude to the Royal **Air Force** for the support and protection which they have given to us. We are fully conscious of the severe strain these operations have imposed on all taking part and we are filled with admiration for the courage and devotion of our comrades in the air.

After the retirement from **Dunkirk**, a few New Zealanders remained in **France** with the British air units to the south of the German breakthrough, and during the next fortnight these squadrons did what they could to impede the enemy as he turned to complete the conquest of **France**. Gallant attacks were made on the advancing German columns by the remnants of the bomber squadrons, while the fighters continued to engage superior numbers in combat. But their efforts were unavailing in the face of the

¹ On 4 June the British Prime Minister stated in the House of Commons, ‘... a week ago I feared it would be my lot to announce the greatest military disaster in our history’.

² Admiral Sir Bertram Ramsay, KCB, KBE, MVO; born 1883; entered RN 1898; Flag Officer Commanding, **Dover**, 1939–42; commanded Eastern Task Force, **Mediterranean**, 1943; died 2 Jan 1945.

enemy’s overwhelming strength and the growing dislocation in the Allies’ rear. Even the bases from which the British aircraft operated were now often of an improvised nature—one New Zealand bomber pilot writes of flying during this time from ‘a hastily prepared wheatfield with the fences pulled down and the bumps flattened by the **Royal Engineers**’. The bomber squadrons continued to suffer heavy losses and New Zealand

airmen were among those killed or taken prisoner of war. On 11 June Flying Officer Peryman ¹ was pilot of one of six Battles which took off from Vendome to bomb a bridge across which the Germans were advancing towards **Paris**. During the attack his aircraft was hit in one of the petrol tanks. It blew up and flames enveloped the cockpit, forcing the crew to bale out. Peryman was the last to leave and his parachute had barely opened before he struck the ground. He had been severely burned about the face, hands and body, and was taken to hospital by the members of a German unit which captured him. In spite of his injuries he attempted to escape the next day but was caught while climbing over a wall.

The German Air Force now directed all its energies to the continuous bombing of communications, towns and airfields, gradually paralysing and undermining the defence. During the third week of June, as the collapse of **France** became imminent, the remaining squadrons of the **Royal Air Force** were withdrawn to England. By that time they had fought a vigorous rearguard action across **France**, through the areas of Rheims and Troyes to the region of the Loire. Finally, operating from the vicinity of Nantes, the fighters had covered the evacuation of the remaining Allied forces from the western ports of **France**. In all squadrons few of the original flying personnel survived; one Battle squadron, it is recorded, had lost its complete complement of aircrew twice over.

It was during the last days in **France**, on 5 June, that Flying Officer 'Cobber' Kain, whose No. 73 Squadron was one of the few fighter units left on the Continent, engaged in what was to be his last combat and shot down a Messerschmitt near Rheims. Two days later he was killed whilst enjoying a final flight over his own airfield before proceeding to England. He was carrying out aerobatics at a low level when a wing-tip of his Hurricane touched the ground and the machine cartwheeled across the airfield and was wrecked. During the early months of the war, when there was little activity in the air, Kain's exploits received phenomenal publicity in the press and he was acclaimed as the Empire's

first air ace of the Second World War. This distinction still appears well

¹ Flight Lieutenant B. W. Peryman; **Christchurch**; born **Christchurch**, 13 Dec 1919; joined **RNZAF** Sep 1938; transferred **RAF** Aug 1939; retransferred **RNZAF** Apr 1944; p.w. 11 Jun 1940.

justified ¹ and there is ample evidence that Kain's fine offensive spirit, together with his outstanding ability as a fighter pilot, was an inspiration not only to his fellow pilots but also to thousands of young men in his own country and, indeed, throughout the world.

In the course of the brief campaign in **France** during June 1940, New Zealand airmen also took part in the operations flown from bases in England. Those serving with the fighter squadrons involved carried out offensive patrols and low-level attacks on enemy aerodromes. They also escorted bombers on their missions over **France**. One particularly successful low-level attack on an enemy-held aerodrome near Rouen was made on 20 June by the Hurricanes from No. 245 Squadron, commanded by Squadron Leader Whitley. ² Flying with him were Flight Lieutenant Mowat and Pilot Officer Spence. ³ The attack was made by two sections, led by Whitley and Mowat respectively, a third being left above for protection. There were some fifty German aircraft on the ground and a considerable number of these were reported damaged and four left on fire. Targets in **France** were also attacked on every possible night by Wellingtons and Whitleys of Bomber Command, 27 such sorties being flown by bombers from the New Zealand Squadron during the first part of June. Typically, on the night of the 5th, seven Wellingtons were led by the flight commander, Squadron Leader Kay, in an attack on the crossroads and marshalling yards at Cambrai. Two nights later eight aircraft were despatched to bomb individual targets: Flight Lieutenant Breckon attacked a bridge across the **Somme**, while Flying Officers Freeman and N. Williams bombed a road junction south of Bailleaux and Pilot Officer W. M. C. Williams a German convoy near Abbeville. Kay, detailed to attack enemy units sheltering in the forest south of Bailleaux, was able to identify and bomb road junctions by the light of

parachute flares and then scatter incendiaries in the forest. They started good fires. Not content with this success, he went down and machine-gunned the woods to add to the enemy's confusion.

Subsequent targets for the Wellingtons included river crossings, road junctions, and railway communications in **France** in an attempt to impede the German advance to and across the Seine. But in

¹ The officer of Kain's squadron who compiled the combat reports and kept a record of his squadron's successes credits Kain with the destruction of at least 14 enemy aircraft, with several more probables.

² Group Captain E. W. Whitley, DSO, DFC; **RAF**; born Epsom, **Auckland**, 17 Aug 1908; joined **RAF** 1930; commanded No. 245 Sqdn, 1939–40; RAF Station, **Haifa**, 1941; No. 234 Wing, **Middle East**, 1942; Nos. 209 and 210 Groups, **Middle East**, 1943; Fighter Leaders' School, 1944; No. 58 OTU, 1945; RAF Station, Church Fenton, 1945.

³ Flying Officer D. J. Spence; born **Christchurch**, 26 Aug 1920; joined **RAF** Jun 1939 killed on air operations, 30 Apr 1941.

spite of many gallant efforts, the small force available and the inexperience of many of its crews prevented Bomber Command from intervening with any decisive effect in the swift course of events in **France**. The enemy's superior mechanical and armoured strength on the ground, combined with his overwhelming air power, very quickly brought about the collapse of French resistance and an armistice was signed at Compiègne on 22 June. By the end of the month the majority of the **Royal Air Force** personnel had returned to the **United Kingdom**, some not without adventure. 'We returned to England by various means,' writes one New Zealand pilot. 'I finished up at Nantes as things were getting hot; thence to Southampton via Jersey in a Tiger Moth which rather stretched its range. Luckily I had a favourable wind and was not

sighted by any hostile aircraft.'

During the last days the airfield at Nantes was crowded with a strange assortment of machines as civil and communication aircraft were pressed into service to aid the evacuation. There were similar scenes at other points. Many men also left from the western ports where the German air attacks on the transports were heavy. Fighter patrols gave what protection they could and were able to drive off many attacks, but one disaster occurred at St. Nazaire on 17 June when the liner *Lancastria* was dive-bombed and sunk and upwards of 3000 perished. A British pilot from No.1 Squadron reported the destruction of the bomber which hit the ship. The fighter pilots were, in fact, the last to leave, with the enemy vanguard almost within striking distance. On completion of the final evacuation at Cherbourg, the last Hurricane to fly over the town and harbour was, appropriately enough, piloted by Air Vice-Marshal Park.

Throughout the short campaign the British airmen had played their part well. In gallant, if forlorn, attempts to stem the enemy advance they had battled against superior odds in the air, reconnoitred and pressed home attacks in the face of heavy fire from the ground. The casualties suffered by the **Royal Air Force** during the battles in **Belgium** and **France** included over 600 aircrew, nearly half of whom were pilots. In addition it had lost, from all causes, over 900 aircraft, including 386 Hurricanes and 67 Spitfires, losses which the service could ill afford at this early stage of its expansion. On the other hand, the men who survived, particularly the fighter pilots, had acquired battle experience and confidence which were to prove of the greatest value in the violent air battles soon to take place over England.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 4 – THE BATTLE OF BRITAIN

CHAPTER 4

The Battle of Britain

NOW Hitler stood triumphant in **Europe**. Only the British people, sheltered for the moment by the narrow moat of the Channel, remained defiant. They knew, however, that the full fury of the enemy would shortly be turned upon their island, and in town and village, factory and garrison, they made ready to withstand the worst the enemy could cast upon them and, if necessary, to resist the invader with whatever weapons remained or could be quickly forged. In these tasks they were inspired by a leader who never failed to express their buoyant and imperturbable spirit. The closing words of his address to the House of Commons on 18 June were typical:

Hitler knows that he will have to break us in this Island or lose the war. If we can stand up to him, all **Europe** may be free and the life of the world may move forward into broad, sunlit uplands. But if we fail, then the whole world, including the **United States**, including all that we have known and cared for, will sink into the abyss of a new Dark Age, made more sinister, and perhaps more protracted, by the light of perverted science. Let us therefore brace ourselves to our duties, and so bear ourselves that, if the British Empire and its Commonwealth last for a thousand years, men will still say: 'This was their finest hour.'

But while the Germans, for their part, were anxious for a speedy decision, they hoped that **Britain** would accept defeat without further struggle and end the war. It was not until **Hitler's** flamboyant peace offers had been repeatedly ignored that the **German High Command** began to argue their plans for an invasion of **Britain**. The difficulties of the operation were realised, in particular by the Naval Staff under **Admiral Raeder**, who insisted that if the operation was to succeed, both the passage and the landing of troops and supplies would have to be protected from aerial attack. This demanded mastery of the air which, in turn, meant the elimination of the fighter arm of the **Royal Air Force**. The Germans shaped their plans accordingly and so it came about that,

during the summer and autumn of 1940, Fighter Command engaged in a series of bitter air battles in defence of the British Isles. They were to prove the most fateful battles of the whole war, and the victory which followed one of the most decisive. The invasion of **Britain** was prevented and the base from which in time the forces of liberation were to set out and free **Europe** was preserved. The legend of German invincibility was destroyed and the power of the **Luftwaffe** considerably weakened. ¹

While it was the fighter pilots of the **Royal Air Force** who were primarily responsible for the victory, aircrews of both Bomber and Coastal Commands made a definite contribution to the upset of the enemy's plans. Continuous reconnaissance patrols were flown over the North Sea and the Channel ports by the coastal aircraft, and as the invasion flotillas were seen assembling in the harbours and canals they were heavily attacked by the bombers. Bomber Command also attacked aircraft factories in **Germany** and the airfields from which the enemy machines flew against **Britain**, while in the Western Approaches the Hudsons and Sunderlands of Coastal Command continued to protect the convoys carrying petrol and supplies to the **British Isles**.

Altogether in the fighter battles, the bombing raids, and the various patrols flown between 10 July and 31 October 1940 by the **Royal Air Force**, 1495 aircrew were killed, of whom 449 were fighter pilots, 718 aircrew from Bomber Command, and 280 from **Coastal Command**. Among those killed were 47 airmen from **Canada**, 24 from **Australia**, 17 from South Africa, 35 from **Poland**, 20 from **Czechoslovakia** and six from **Belgium**. Forty-seven New Zealanders lost their lives, including 15 fighter pilots, 24 bomber and eight coastal aircrew. The names of these Allied and Commonwealth airmen are inscribed in a memorial book which rests in the Battle of **Britain** Chapel in **Westminster Abbey**. In the chapel is a stained glass window which contains the badges of the fighter squadrons which operated during the battle and the flags of the nations to which the pilots and aircrew belonged.

But the Battle of **Britain** was not fought exclusively in the air. The constant devotion to duty of the ground staffs, often under the enemy's

fire, was a vital contribution to the victory, while the hard work of Flying Training, Maintenance and Technical Commands greatly increased the flow of men and machines to the fighting units. A notable part was played by the men and women at the anti-aircraft gun sites, while the contribution of those who worked in the aircraft and munition factories should also be remembered.

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After the fall of **France** it was some weeks before the Germans began the attacks designed to bring the British fighter squadrons to battle and destroy them. It was not until 2 July that **Hitler**

¹ According to enemy records, a total of 1733 German aircraft were destroyed between 10 July and 31 October 1940. Fighter Command's losses were 915 machines.

issued the first orders to prepare for an invasion; a fortnight later these were followed by a directive stating that, 'As England, in spite of the hopelessness of her military position, has so far shown herself unwilling to come to any compromise, I have therefore decided to prepare for, and if necessary, carry out an invasion of England. I therefore issue the following orders: 1. The British Air Force must be eliminated to such an extent that it will be incapable of putting up any substantial opposition to the invading troops....'

The German Air Force was now faced with the tasks of deploying its units and arranging for their supply and maintenance in the new positions, so that a further three weeks elapsed before they were able to develop heavy and sustained attacks on **Britain**. In the meantime, the Germans attempted to draw Fighter Command into battle under unfavourable conditions by sending formations against coastal shipping and ports during daylight, with scattered attacks on inland targets by night.

This short respite from immediate heavy attack enabled the whole defensive system of Fighter Command to be strengthened and extended to cover areas previously regarded as comparatively safe but which now faced enemy-occupied territory. No. 11 Fighter Group was able to recover from the heavy fighting over **Dunkirk; squadrons were re-equipped and civilian airfields taken over and prepared as second-line fighter airfields, which later proved invaluable when enemy bombs wrought heavy damage on permanent **RAF** bases in south-east England. The production of fighter planes was increased considerably, but the shortage of trained pilots remained serious and could not be remedied so easily. ¹ It was in this respect that the Dominions and Allies were able to make a valuable contribution.**

There were, at the beginning of July 1940, 60 New Zealand pilots scattered among the operational squadrons of Fighter Command. During the next two months others reached these units, and by the time the heaviest air fighting ended in October, 95 pilots had served with the fighter squadrons. A few men were also engaged on various tasks in the complex ground organisation.

¹ **There were only three fighter operational training units at the time. Nevertheless, during the lull between **Dunkirk** and the start of the German attacks, they worked intensively, an **RAF** report noting that, 'Maximum output was helped by the keenness of the pupils; some New Zealanders who had been trained on Gordons and Vincents in their own country, reached Hawarden one evening, spent the night on Spitfire cockpit drill by the light of torches and began flying the following morning. Salvage of aircraft was imperative: if a Spitfire from Hawarden made a forced landing near the Dee, every available man was rushed to the spot to drag it out of reach of the tide. When the battle began the Operational Training Units added unofficial sorties to their other duties and shot down several raiders.'**

During the battle four New Zealanders, Squadron Leaders Blake, ¹ P. G. Jameson, Lovell-Gregg ² and H. D. McGregor commanded fighter squadrons, while others, several of whom had taken part in the air

fighting over **France** and **Dunkirk**, were to lead squadrons or formations against the enemy at various times. Their leadership, born of skill and experience, was a further contribution to the victory which followed. Air Vice-Marshal Park was largely responsible for the conduct of the battle itself,³ since his No. 11 Fighter Group covered south-eastern England and the approaches to **London**, the area over which the main fighting was to take place. Throughout the battle Park worked tirelessly in the operations room at his headquarters near **London** where, by means of the unique system for providing advance information that had been developed, it was usually possible to anticipate the enemy's intentions and make the dispositions necessary to engage his air formations. At the same time Park's concern for the men who were fighting the battle was constant and, after a day of heavy attacks, he would often fly his Hurricane to visit squadrons in order to see for himself how they were faring. In his No. 11 Group approximately half the operational squadrons of Fighter Command were concentrated, to be reinforced by neighbouring groups when the situation demanded. In the event, almost every unit in the Command was heavily engaged at some period of the battle, for the squadrons in the south-east became exhausted and had to be interchanged with those in quieter areas.

The main strength of the British fighter force lay in its Hurricanes and Spitfires. At the beginning of June 1940, out of a total of 446 operationally serviceable aircraft, 331 were Hurricanes and Spitfires, roughly in the proportion of three to two. By the first week of August these totals had been increased to 704 and 620 respectively. The Spitfire, particularly at higher altitudes, was superior to anything the Germans possessed at this time, while the Hurricane, although somewhat slower, was the equal at medium altitudes. Both types had eight machine guns which gave them the superior firepower that, in the early stages, proved so devastating against the unarmed German bombers. At the same time, the early adoption

¹ Wing Commander M. V. Blake, DSO, DFC; born Newman, Eketahuna, 13 Feb 1913; permanent commission **RAF** 1937;

commanded No. 234 Sqdn, 1940–41; Wing Leader, Exeter and Portreath, 1941–42; p.w. 19 Aug 1942.

² Squadron Leader T. G. Lovell-Gregg; born **Wanganui**, 19 Sep 1912; joined **RAF** 1931; commanded No. 87 Sqdn, 1940; killed on air operations, 15 Aug 1940.

³ In his despatch on the Battle of **Britain**, Air Chief Marshal Sir Hugh Dowding, Commander-in-Chief Fighter Command, writes: 'I must pay a very sincere tribute to Air Vice-Marshal Park for the way in which he adjusted his tactics and interception methods to meet each new development as it occurred... during periods of intense fighting there was no time for consultation and he acted from day to day on his own initiative.'

of armour in British fighters gave them a further initial advantage, although the Germans were quick to imitate our methods. Until the end of September, the Hurricanes and Spitfires were able to deal effectively with the enemy fighters, since most engagements took place at heights below 20,000 feet. During the last stage of the battle, however, when the enemy fighters operated at heights above 25,000 feet and their engines had been fitted with two-stage super-chargers, they proved superior and it was only by better tactics that British pilots obtained a certain amount of hard-earned success. Throughout the battle a few squadrons equipped with aircraft found unsuitable for day work ¹ were employed on night interception, since night attacks persisted and increased as the Germans found day bombing more and more expensive. But these operations had little bearing on the main German objective, the attainment of air superiority. The decisive battle was fought by day.

In launching their mass daylight attacks the Germans had one outstanding advantage. They could direct a heavy raid against one part of England where only a proportion of the British fighter strength was available, and by simultaneous feints towards other parts compel Fighter Command to keep considerable forces away from the main point of attack. It was therefore vital that the defenders should have sufficient

warning of a raid in order that the fighter squadrons could be airborne in time to make an interception. As a result of Sir Robert Watson-Watt's invention of radio-location, this warning could be given by a series of stations sited at intervals along the British coast. Over land, where the early type of radar was not effective, raid reports were supplied by a chain of Observer Corps' posts whose members tracked enemy formations by sight and sound. And herein lay the essence of Fighter Command's victory. Had the Group Commanders been compelled, by the absence of early warning, to maintain constant standing patrols, they would frequently have found their squadrons at the disadvantage of having to make interceptions with fighters running low in fuel. In addition pilots, engines, and maintenance crews would have been subjected to an intolerable strain by long hours of wasteful flying. The warning system enabled Fighter Command to identify approaching enemy forces and allot the interception to particular groups, and also to reinforce one group by another if necessary. The Group Commander decided which of his sectors should meet any specific raid and detailed the strength in squadrons to be used.

¹ The Blenheim, owing to its low speed and lack of manoeuvrability, had been turned over to night duties for these reasons, and because adequate space was available for an extra operator and the scientific apparatus which was necessary for the development of a new night-interception technique. The Defiant, after some initial success, proved to be too vulnerable against fighters and was also relegated to night work and the attacking of unescorted bombers.

The sector commander selected the units to be employed and operated the machinery of interception, using the position, course, height and speed of the enemy aircraft and of his own fighters, information which was concurrently displayed on his plotting table in the operations room. Initially the fighters were controlled by a series of courses broadcast by radio-telephone until the enemy was sighted, tactical control then passing to the fighter leader in the air who directed

his pilots into battle. This was, generally speaking, the system under which the battle was fought. Dependent on constant alertness and attention to detail by hundreds of men and women, it had been organised by Air Chief Marshal Dowding in the pre-war years, and because of its inherent flexibility it enabled the German mass attacks to be met and defeated.

During July 1940 Goering made his dispositions for the assault that was to secure the air supremacy which the German High Command regarded as the essential prerequisite to invasion. By the end of that month a striking force of some 2600 aircraft, consisting of 1480 bombers, 760 single-engined and 220 twin-engined fighters, together with 140 reconnaissance machines, had been assembled at various airfields in **France**, **Belgium** and **Holland**. In addition there was a force of approximately 130 bombers and 30 fighters stationed in **Norway** which had a diversionary value in that it compelled the **RAF** to retain fighter squadrons in the north. The elimination of the **RAF** and the British aircraft industry was to be accomplished in two stages. In the first place, the fighter defences located south of a line between Chelmsford and Gloucester were to be beaten down, after which the air offensive was to be extended northwards by stages until **RAF** bases throughout England were covered by daylight attacks. The first stage was timed to begin early in August, and the day for its launching was given the dramatic code-name of *Alder Tag* (Eagle Day). Goering considered that this phase, the destruction of Fighter Command in the south, would occupy four days, and the whole task of eliminating the **RAF** four weeks. Thereupon the invasion itself, with **Luftwaffe** support, was to be aimed in its greatest strength at the English coast between **Dover** and the Isle of Wight. *Alder Tag* was provisionally fixed for 10 August, given favourable weather, so that the invasion could take place at some time during the first two weeks in September. In the event, Goering's timetable went badly awry and **Hitler** was forced to postpone the actual date of the invasion, first by a few days, then by a week, then indefinitely, and finally 'until the following year'.

During the first week of July when the fighter pilots were engaged in intercepting sporadic enemy raids against widely scattered targets, several New Zealand airmen were among those who had successful combats. Flying Officer Carbury, leading a section of Spitfires, shared in the destruction of an enemy bomber near Aberdeen; another was claimed by Pilot Officer Lawrence ¹ while flying on convoy patrol off Land's End—this was his squadron's first victory. On 9 July Flight Lieutenant Deere had the first of many amazing experiences that were to come his way during the next two months. He was with a squadron of Spitfires sent to intercept an enemy formation reported near **Dover**. There they found two groups of Messerschmitts escorting a seaplane which, it was later discovered, had been sent to survey part of the south coast. Deere led a section in to attack and the enemy fighter he selected went straight down into the sea. Whilst manoeuvring to attack a second Messerschmitt, he suddenly saw the enemy plane coming straight at him. Both pilots started to fire simultaneously, neither gave way, and the aircraft collided. Deere's Spitfire was severely damaged, the Messerschmitt having caught the propeller and hood. Unable to bale out, with his engine stopped, and nearly blinded and choked by glycol fumes, he managed to head inland where, after ploughing through various obstacles, his aircraft finally came to rest in the middle of a cornfield and caught fire. Deere broke his way out but, apart from minor abrasions and slight burns, he was uninjured and the following day was back on patrol again.

Attacks on coastal targets and shipping began in earnest during the second week of July. ² These raids were not easy to intercept owing to the limited warning that could be given of the enemy's intention and the fact that standing patrols could not be maintained in sufficient strength to deal with the larger formations the enemy was now employing. Another difficulty was that the Germans would sometimes send over a small raid first so that the British fighters would be returning to their bases to refuel when the actual attack developed. Nevertheless, a considerable toll was taken of these raiders ³ and the damage inflicted on shipping was not extensive.

It was on the first day of these heavier attacks that Pilot Officer D. G. Cobden had two successful engagements whilst leading a section of No. 74 Squadron. Enemy bombers escorted by fighters were attacking a convoy off **Margate** when the Spitfires arrived. Confused fighting developed during which Cobden got on the tail

¹ Squadron Leader K. A. Lawrence, DFC; **Christchurch**; born Waitara, 25 Nov 1919; joined **RAF** Mar 1939; commanded No. 185 Sqdn, **Malta**, 1942; transferred **RNZAF** Jul 1945.

² On the 10th two formations of German aircraft attempted to attack convoys in the Channel. This day, when really large enemy forces—70 in one attack—were first employed, is generally regarded as marking the opening of the battle.

³ 192 enemy aircraft were destroyed during the period of these attacks on coastal targets *i.e.*, 10 July–7 August.

of one of the escorting Messerschmitts and fired a number of bursts at close range. The enemy plane was last seen going down on fire. In a subsequent interception off **Dover**, Cobden hit one of the bombers, but before he could finish it off he was attacked by several Messerschmitts which combined to riddle his Spitfire. However, he managed to break away and landed on Lympne aerodrome with his undercarriage retracted. Two days later Pilot Officer Bickerdyke ¹ was with No. 85 Hurricane Squadron, sent to aid a convoy that was being attacked by ten Heinkels off the Suffolk coast. He set about one of the bombers and saw it burst into flames and dive into the



THE BATTLE OF BRITAIN
PHASE 1: 10 July–18 August 1940
 Attacks on South Coast, shipping, ports and airfields

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sea. Altogether four of the enemy were destroyed on this occasion without loss. Among other successful combats on the same day was the destruction of a Junkers 88 off the Isle of Wight by Pilot Officer Yule, who also damaged a Messerschmitt 110 in the same engagement.

In the intermittent enemy attacks on shipping and coastal targets during the next week, British pilots continued to achieve good results, further successes by New Zealanders including the shooting down of a Messerschmitt over the Channel by Pilot Officer Gray and the destruction of a Dornier bomber by Pilot Officer Gibson. On 19 July, however, Fighter Command suffered a sharp reverse in the air battle which followed a German attack on shipping in

¹ Pilot Officer J. L. Bickerdyke; born **Christchurch**, 11 Feb 1919; joined RAF Apr 1940; killed in flying accident, 22 Jul 1940.

Dover Harbour. A formation of nine Defiants, sent to intercept the retreating enemy bombers, was surprised by Messerschmitt fighters and six Defiants were shot down; three of these were captained by New Zealanders, Pilot Officers Gard'ner, ¹ Kemp ² and Kidson, ³ only Gard'ner

surviving to be picked up from the sea. Although outnumbered in this engagement, the inferiority of the Defiants—turret fighters which had achieved an initial surprise over **Dunkirk**—was evident, and they were withdrawn from day operations shortly afterwards.

The enemy was now regularly employing large formations against ports and shipping in the south. On the 24th one of these attacks was directed against the Thames Estuary by a force of twenty bombers escorted by some thirty fighters. The first unit to intercept the Germans was No. 54 Spitfire Squadron, led by Flight Lieutenant Deere, and in the dogfights which followed, 'with aircraft milling in and out of cloud and the air thick with tracer and incendiary smoke', the squadron destroyed at least five of the enemy, two of them crashing in the main streets of **Margate**. Only two Spitfires were lost and shipping in the **Thames** was undamaged. Deere accounted for one of the enemy and, apart from this, reported 'general wild bursts at various enemy aircraft but unable to get a decent bead because of constant attacks from behind.' Pilot Officer Gray, who was flying with Deere, sent one Messerschmitt down and then attacked a second which burst into flames, the German pilot baling out into the sea. Enemy pressure continued to increase. On the afternoon of the following day, some eighty Messerschmitts escorted forty dive-bombers to attack a convoy off **Dover**. Five Spitfires on patrol in the vicinity attempted to prevent the bombers from reaching the ships but they were at once attacked by the escorting fighters. Gray, who was flying one of the Spitfires, afterwards reported modestly, '... attempted to engage the dive-bombers but was immediately attacked by about a dozen Messerschmitts and being rather outnumbered found it difficult to get in a burst.' However, he did succeed in sending one of them down 'apparently out of control'. A few hours later both he and Deere were leading sections of their squadron against another large force of dive-bombers attacking the same convoy. Again the British pilots had great difficulty in evading the escorting fighters, but the enemy bomber formation was so dispersed by the Spitfires that other squadrons coming into the battle soon afterwards were able

¹ Squadron Leader J. R. Gard'ner; **RAF**; born Dunedin, 14 Jun 1918; joined **RAF** Jan 1939; transferred **RNZAF** Jan 1944.

² Pilot Officer J. R. Kemp; born **Napier**, 14 Aug 1914; joined **RAF** Jan 1939; killed on air operations, 19 Jul 1940.

³ Pilot Officer R. Kidson; born **Wellington**, 7 May 1914; joined **RAF** Aug 1938; killed on air operations, 19 Jul 1940.

to take a heavy toll. Nevertheless, the Germans displayed great persistence in their attacks, and five ships in the convoy were sunk with a further five damaged, one of which had to be beached.

On 29 July shipping in Dover Harbour was again the target for a heavy attack by some forty dive-bombers. Four squadrons of fighters, two of Spitfires and two of Hurricanes, were despatched to intercept; all were engaged and 15 of the enemy were claimed destroyed for the loss of three Spitfires. Leading a section of No. 501 Hurricane Squadron, Pilot Officer Gibson was early in combat. He afterwards reported:

Sighted enemy aircraft approaching Dover Harbour—engaged a Junkers 87 as it broke away from attack on the ships. Saw enemy machine dive steeply with black smoke pouring from it. Broke off attack as I saw a Spitfire with another Junkers 87 on its tail. Fired at this dive-bomber which burst into flames and plunged into the sea.

In another encounter Pilot Officer Horton ¹ drove a Junkers 87 down to sea level but ran out of ammunition before he could destroy it. He then made close dummy attacks in an effort to force the bomber lower and was finally rewarded by seeing it strike the water and break up.

So far the enemy's attacks had been directed mainly against the southern coasts of England. In fact, German eyes were already firmly fixed on this part of the country and the fighter squadrons there. Therefore pilots stationed in other parts of **Britain**, although steadily employed in investigating unidentified plots of aircraft and in protecting

coastal convoys, had not been heavily engaged. They were available to reinforce the southern sectors but, before they were called upon to do so, many of them flew long hours on patrol and escort duties, seldom sighting an enemy aircraft.

By the end of the first week in August the **Luftwaffe** had completed its preparations for the launching of mass daylight attacks, and the next few weeks represented the crucial phase of the battle. Raids on coastal towns and shipping continued, but the main weight of the offensive now shifted to the radar stations, the fighter airfields and aircraft factories in southern England; from the scale of attacks delivered, the tactics employed and the objectives selected, it was clear that the enemy was attempting to gain air superiority by a process of exhausting and swamping the fighter defences. During this phase the Germans showed great versatility both in the timing and direction of their attacks as well as in the formations and tactics they employed. First an attack would be delivered from Calais perhaps towards the **Thames**

¹ Flying Officer P. W. Horton; born Dunedin, 25 Mar 1920; joined **RAF** Mar 1939; killed on air operations, 16 Nov 1940.

Estuary; then, after a carefully timed interval, when the British fighters drawn eastwards might be expected to be at the end of their endurance, a heavy attack would be made on Southampton or **Portland**. Other threats, after being built up to formidable dimensions, would prove to be only feints and the enemy formations would turn away before reaching the English coast, only to return in half an hour when the fighters sent up to intercept them were landing. 'The main problem', Air Vice-Marshal Park writes, 'was to know which was the diversionary attack, and to hold sufficient squadrons in readiness to meet the main attack when this could be discerned from the unreliable information received from the radar stations after they had been heavily bombed.' The German methods of bomber escort were also varied. At first, a

strong fighter formation would fly a mile or so behind and above the bombers. But when the enemy found that the Spitfires and Hurricanes could deliver a well-timed attack before his fighters could intervene, or when the British fighters attacked from ahead or below, he met each move with another change of tactics so that, towards the end of August, German fighter escorts were flying inside the bomber formation, others were below it, and a series of fighters stretched upwards in tiers for several thousand feet. One pilot described the appearance of these formations as 'like looking up a flight of moving stairs.'

The first really heavy attack on a land target came on the morning of 11 August. On this occasion there was little doubt as to the enemy's objective, since three enemy formations were plotted over mid-Channel on course for **Portland and no convoy was in the vicinity at the time. Accordingly, the greater part of eight squadrons was ordered towards that area to intercept. Among them was No. 213 Hurricane Squadron from Exeter, led by Squadron Leader McGregor. In the early stages the Messerschmitt fighters, which were some distance east of the main formation, were brought to battle by other squadrons, but it fell to McGregor's Hurricanes to make the only interception of the bombers before they reached their target. The Hurricanes had been ordered to patrol at 10,000 feet over **Portland** and had just arrived when the enemy was sighted—50 Junkers 88s flying at about the same level, with an escort of 30 Messerschmitt 109s above and behind them. The Hurricanes immediately attacked the head of the bomber formation and forced many of the bombers to jettison their loads wide of any target. McGregor and his pilots claimed seven of the Junkers destroyed.**

The next few days saw intensive enemy activity between the Thames Estuary and the Isle of Wight with attacks on radar stations, airfields, ports and coastal shipping. In an effort to exhaust the British squadrons, the Germans continued to send simultaneous raids against widely separated areas; feint approaches were also made to conceal the real point of attack and to confuse the defenders. Portsmouth and Southampton were frequent targets during this period, and on one or two

occasions enemy aircraft penetrated as far as **London**, notably on 15 August when a force of some thirty bombers broke through to bomb Croydon. In their efforts to meet these heavy attacks the fighter squadrons in southern England were now constantly engaged in interception and combat. Early on 12 August Deere led eleven pilots from No. 54 Squadron—with Gray leading a section—to intercept an enemy raid over Kent. Very soon they sighted some twenty Messerschmitt 109s and climbed to attack. Deere claimed one of the enemy fighters while Gray, after shooting one down near **Dover**, pursued a second as far as the French coast where he saw it crash on the beach near Cap Gris Nez. The same evening Deere claimed two Messerschmitts while leading his squadron to intercept an attack on Manston aerodrome in Kent. The enemy formation was prevented from reaching its objective and most of the bombs fell harmlessly in open country. Meanwhile, during the afternoon, the Germans had launched a heavy attack against two convoys off North Foreland. But action was joined with such vigour that the dive-bombers never approached within striking distance of the ships. Gibson, who took part in the interception, attacked four of the enemy machines and saw the pilot of one of them bale out. Pilot Officer W. S. Williams ¹ was with one of the squadrons which intercepted another attack by nearly 200 aircraft towards Portsmouth. After he had set one bomber on fire, his Spitfire was heavily hit and he was forced to break away. Williams subsequently landed at an airfield on the Isle of Wight with wheels up and his aircraft on fire. Shortly after he had scrambled clear, it blew up.

On 15 August favourable weather enabled Goering to launch the grand assault he had planned for 'Eagle Day', and in reply Fighter Command made its maximum effort for the whole battle. This was indeed a memorable day. Altogether five major actions were fought, including one in the north-east where a lasting victory was achieved. This last attack came in the early afternoon with two simultaneous thrusts against Tynemouth and the airfield at Drifffield, 100 miles to the south. In both cases aircraft based in **Norway** and **Denmark** were employed. The Germans wrongly anticipated that the main British

fighter strength had been drawn southwards, and they met with such strong opposition and their formations received such a drubbing that the experiment was never repeated.

¹ Pilot Officer W. S. Williams; born Dunedin, 28 Sep 1920; joined **RAF** Mar 1939; killed on air operations, 21 Oct 1940.

But although activity on this day ranged over areas as widely separated as **Plymouth** and the Tyne, the heaviest fighting took place over south-eastern England. All the 22 squadrons available there were engaged, many twice, some three times during the day.

New Zealand airmen were early in action. The first major attack of the day, directed against aerodromes in **Kent**, saw Pilot Officer Gibson leading a section of three Hurricanes from No. 501 Squadron which became involved with a formation of some twenty dive-bombers. Each member of the section claimed one of the enemy, Gibson seeing his victim burst into flames and crash into the sea. He then noticed that other Junkers 87s were bombing his home airfield at Hawkinge so returned at speed to engage them. In the combats which followed he damaged one of the dive-bombers before their rear gunners set his Hurricane on fire. He was then directly over **Folkestone** but managed to steer his blazing machine away from the town before abandoning it. Deere's No. 54 Squadron was involved in two major clashes with the enemy during the day. In the first encounter Deere himself scored an easy victory when he caught a German so intent on pursuing a damaged British aircraft that he failed to see the approach of the Spitfire and was blown to pieces in the air. During a further interception by his squadron, Deere chased a Messerschmitt across the Channel and finally shot it down near Calais. Then almost immediately he was set upon by five German fighters which pursued him back towards the English coast. His instrument panel was shattered and his aircraft riddled with bullets. Fortunately the attackers broke away as the coast was reached, but a minute or two later his Spitfire burst into flames and he was forced to

bale out at about 1500 feet. Once again his luck held and he landed in some shrubs which broke his fall. ¹ In a further engagement over the Isle of Sheppey, near the mouth of the **Thames**, Pilot Officer McIntyre ² shared in the destruction of one Dornier and damaged a second. Another victim was claimed by Pilot Officer Mackenzie, ³ who was with one of the squadrons which intercepted the German force from **Norway** and **Denmark** in the north-east of England.

¹ Describing this incident, Deere afterwards told how 'Bullets seemed to come from everywhere and pieces flew off my aircraft. Never did it take so long to cross the Channel. Then my Spitfire burst into flames, so I undid my straps and eased the stick back to gain height before baling out. Turned my machine on its back and pushed the stick hard forward. I shot out a few feet but somehow became caught up. Although I twisted and turned I could not free myself. The nose of my aircraft had now dropped and was pointing at the ground which was rushing up at an alarming rate. Then suddenly I was blown along the side of the fuselage and was clear. A hurried snatch at the rip cord and, with a jolt, the parachute opened.'

² Squadron Leader A. G. McIntyre; born **Auckland**, 4 Jan 1917; joined **RAF** Apr 1940.

³ Squadron Leader J. N. Mackenzie, DFC; **RAF**; born Goodwood, Otago, 11 Aug 1914; joined **RAF** 1937; transferred **RNZAF** Jan 1944; commanded No. 488 (NZ) Sqdn, **Singapore**, 1942; No 64 (**RAF**) Sqdn, 1944.

During the afternoon of the 15th heavy attacks were directed towards Portsmouth and **Plymouth** by forces totalling nearly 300 aircraft. No. 87 Hurricane Squadron, led by Squadron Leader Lovell-Gregg, was one of the 14 units despatched to intercept. Near Portland the Hurricanes met some thirty dive-bombers escorted by approximately a hundred fighters, and the air battle which followed was described as the fiercest the squadron had so far experienced. Lovell-Gregg was shot down but his loss was avenged by two other New Zealanders flying with

him, Flying Officers Ward and Tait, ¹ each of whom claimed a Messerschmitt. In another encounter between Dover and Folkestone Pilot Officer Smith, ² after persistent attacks in which he exhausted his ammunition, finally saw his target, a Messerschmitt 109, go spinning earthwards. His squadron had intercepted a large force of enemy fighters acting as withdrawal cover for a formation attacking further inland, and had fared badly losing four pilots in the encounter. His was the only success. These actions were typical of many in which New Zealand pilots were involved on this memorable day, at the end of which 76 German aircraft had been destroyed for the loss of 34 British fighters. ³

But this was only the beginning. During the next few days the Germans made further strenuous and determined efforts to beat down the fighter defences in south-eastern England and, apart from a lull on 17 August, heavy and persistent attacks were repeated several times each day on airfields in that area. But after losing 195 aircraft in four days, Goering was forced to call a temporary halt in order to regroup his battered squadrons. Then, on 24 August, the Luftwaffe returned to the assault, extending its incursions as far inland as the airfields around London itself. However, these renewed attacks, although they employed as many as 150 aircraft in a single raid, lacked some of the fire that had characterised the earlier onslaughts and, on occasions, formations were seen to break up and turn back before reaching their objectives. There is little doubt that the Germans were surprised by the tough and

¹ Flight Lieutenant K. W. Tait, DFC; born Wellington, 19 Nov 1918; joined RAF 1937; killed on air operations, 4 Aug 1941.

² Wing Commander I. S. Smith, DFC and bar; RAF; born Invercargill, 21 May 1917; joined RAF Mar 1940; commanded No. 151 Sqdn, 1942–43; No. 487 (NZ) Sqdn, 1944.

³ At the time, 185 German aircraft were claimed as destroyed. But this was not due to any great exaggeration on the part of the fighter pilots, whose claims were almost always made

in good faith. In the confused and heavy fighting which occurred it was easy for a pilot to conclude that the German aircraft he saw crash was the one at which he had been firing. At the same time several pilots could, unknown to each other, share in the destruction of one and the same enemy. It is interesting to note that on days of less intensive fighting, the **Royal Air Force** claims were often actually lower than the figures which German records now reveal.

sustained resistance which they continued to encounter.

Nevertheless the pressure was sufficiently heavy to strain the defences to the limit. The bombing caused considerable damage to fighter airfields, their communications, and to the ground organisation, damage which was more serious than was generally realised at the time, and it was only the most determined and valiant efforts of the ground staffs that kept the Hurricanes and Spitfires flying. In the air battles the defenders were heavily outnumbered on almost every occasion, since the very short warning received by the control made it difficult to get squadrons from different airfields assembled into a single formation. Later, as the Germans penetrated further inland, longer



PHASE 2: 24 August–6 September 1940
Attacks on airfields covering London

PHASE 2: 24 August–6 September 1940
Attacks on airfields covering **London**

warning enabled pairs of squadrons to be grouped together more frequently as one fighting formation, but in the meantime it was

imperative to defend the airfields or lose the battle. Thus it was that during this phase the Germans met a succession of attacks by individual squadrons—attacks which, although not always fully co-ordinated, frequently thwarted their efforts to reach some vital target in strength.

Usually when ordered to intercept, a squadron climbed quickly to gain the advantage of height, during which time the leader received further information regarding the enemy's height and direction. On sighting the German aircraft the leader gave the signal for attack to his squadron over the radio-telephone. Thereupon it became a matter of individual combats in which each pilot had his own swift decisions to make in applying the tactics that had been carefully worked out beforehand. Sometimes these combats were short and sharp. As one New Zealand pilot related on 18 August:

We sighted about twenty Messerschmitts below us ... dived on to one of them and after several bursts saw his perspex collapse and the aircraft spiralled into the sea.

On the same day another reported:

Intercepted a formation flying south ... they dived towards the coast. We followed and I attacked a Messerschmitt from the rear. Smoke came from him as I broke away and eventually saw him crash about 5 miles from the coast.

But often the fighting was more confused with machines milling round as the British fighters broke into the enemy formations:

Attacked a Messerschmitt with a short burst but broke away owing to another on my tail. Turned and got a snap shot at him. Now had three on my tail so climbed steeply and got a short burst at one of them. Climbed further and dived on a Dornier which went down with smoke pouring from one engine. Then turned on a Messerschmitt which was diving on my tail. Gave him a burst but saw others above me so climbed away and dived on a straggler and got in a short burst whilst dodging

another. Saw another formation ... headed in that direction and dived on one Messerschmitt giving him a burst but had to climb steeply to avoid others. Then attacked a straggling bomber but ran out of ammunition so zig-zagged home.

It was during this critical phase of the battle that several New Zealand airmen—notably Deere, Gray and Gibson—established themselves as outstanding fighter pilots. Gray accounted for at least seven enemy machines in the intensive air fighting of the last two weeks of August. One of his victims crashed into the sea after he had pursued it to within half a mile of the French coast; another blew up and disintegrated in mid-air after his first burst, while two more fell to him whilst they were attacking the airfield at Hornchurch, Essex, where his No. 54 Squadron was based. It was after yet another successful combat that his victim landed in a field in Kent and Gray, circling above, saw the German pilot expressing his anger at being shot down by jumping up and down on his life jacket. In a further engagement Gray destroyed two more Messerschmitts when his squadron intercepted a formation retiring after a bombing attack on Tilbury. But during these various encounters he twice had narrow escapes. On the first occasion, his aircraft suddenly went into a spiral dive after the elevator control wires had been severed by a stray bullet, Gray just managing to regain control and land safely. During another encounter a cannon shell exploded behind his cockpit but he was uninjured, even the splinters missing him entirely. Strangely enough Gray, who was to win further distinction in the Middle East and later in France, had failed to pass his medical examination in Wellington when he first applied for a commission in the RAF in 1936. It was not until two years later, after he had worked on a farm to improve his health, that he was finally accepted for training as a pilot.

With the same squadron, and frequently leading either sections or the whole squadron, Flight Lieutenant Deere continued to score more successes during the same period. One of these came on the morning of 28 August when No. 54 Squadron was the first unit to intercept a force of some sixty aircraft over Manston, in Kent. Shortly after he had shot

down one of the enemy fighters, Deere's Spitfire was hit and so badly damaged that he was once again forced to bale out. After just missing a farmhouse he landed in the middle of a fully-laden plum tree, bringing most of the fruit to the ground. It is recorded that this tree happened to be the only one still bearing fruit, a choice crop that was being carefully husbanded, and the farmer's indignation on finding the hefty New Zealander sprawling in the bare tree was, for a time, considerable. Three days later Deere had what was his luckiest escape when the airfield at Hornchurch was bombed just as the squadron was ordered to take off. Eight aircraft had safely left the ground and the remaining section, which he was leading, was in the act of taking off when bombs exploded near them and all three Spitfires were wrecked. One machine was thrown across a stream two fields away but the pilot scrambled out unhurt. Deere had one wing and the propeller torn off his Spitfire, whereupon it rose in the air, turned over, and slid across the airfield upside down. He was extricated amidst bursting bombs by the pilot of the third machine, which had suffered a similar fate except that it had landed the right way up. A few minutes later this rescuer collapsed and was carried to safety by Deere. There were other similar narrow escapes. On the same day Pilot Officer Tracey,¹ after making a head-on attack against a Dornier, which went down with an engine on fire, found his oil duct was pierced so headed for Biggin Hill, only to land just as the enemy bombers arrived overhead. He attempted to take off again but his machine was thrown about and badly damaged by flying metal and debris from bursting bombs. It was indeed inevitable that, under the continuous enemy pressure, fighter aircraft should occasionally be caught on the ground.

During these weeks of heavy fighting Flight Lieutenant Gibson led No. 501 Squadron on many occasions with great skill and

¹ Flying Officer O. V. Tracey, DFC; born Dunedin, 15 Mar 1915; joined RAF Aug 1939; killed on air operations, 8 Dec 1941.

courage. After one interception of bombers attacking Manston airfield in Kent, he reported:

The enemy bomber started smoking as I broke away. Turned to attack again only to see him crash into the sea about a mile off Margate.

On 29 August, after sending a Messerschmitt down in flames, Gibson found his own aircraft on fire and had to bale out over the sea, two miles from the coast. But he was picked up by a motor boat and a few days later was reporting:

There were about twenty bombers escorted by some thirty fighters above and behind them ... a dogfight started and I managed to position myself on the tail of a Messerschmitt and gave him a short burst. He wobbled and then dived to the ground and crashed near Kingswood....

By the last week of August the heavy fighting had much depleted the squadrons of No. 11 Group and a number had to be withdrawn,¹ their places being filled by units from other groups which had been comparatively inactive. Among those whose squadrons had now moved south into the battle area was Flying Officer Carbury, of No. 603 Squadron, who was to win both the Distinguished Flying Cross and bar before the end of the battle. Carbury had been with this squadron before the war and had done valuable work in training pilots when the unit was re-equipped with Spitfires. During the more recent period while stationed in a comparatively quiet area, he had nevertheless twice engaged in successful combat. On 28 August his squadron entered the thick of the battle and was to be continually engaged in the interception of enemy formations over Kent; during the next ten days Carbury was to claim eight victims. The first of these was shot down while he was leading a section of Spitfires on patrol near Manston airfield. After a frontal attack the Messerschmitt '... began to smoke and then blew up.' On 31 August, when particularly heavy raids were directed against airfields around London, Carbury was able to report the destruction of five enemy machines in three successive engagements. Early in the day his squadron intercepted a formation of some twenty enemy fighters. '... we

were climbing over **Canterbury** when the enemy were sighted below ... dived on a Messerschmitt 109 which turned over and spun in, the pilot jumping by parachute.' The second encounter took place over his own airfield.

.... Heard over the radio-telephone that enemy were bombing home base so set course and saw enemy proceeding eastwards. Attacked one Heinkel which went straight down into the ground. Made a beam attack on another which after a long burst, went on its back, the pilot jumped and the aircraft crashed and burst into flames near Southend.

¹ Among them was No. 54 Squadron with which Deere and Gray were flying. During the next month both men did valuable work training new pilots.

His third report regarding his part in an engagement with a large enemy formation during the afternoon was equally brief:

Sighted enemy aircraft over **London** and we attacked, three of us going for nine Messerschmitts. Got one of them which went straight down. After beam attack on another, it rolled over and went down into a wood.

On the afternoon of 30 August Pilot Officer Hodgson ¹ was engaged with No. 85 Hurricane Squadron over the Thames Estuary against some thirty Dornier bombers escorted by about one hundred fighters. After damaging one of the Dorniers Hodgson became involved with a Messerschmitt which he shot down. But in this combat his Hurricane was heavily hit and the engine set on fire. He was about to bale out when he realised that he was directly over the **Thames** oil storage tanks and a thickly populated area. By skilful side-slipping he managed to keep the fire under control and finally landed in a field in Essex, just missing wires and other obstacles erected to prevent the landing of enemy forces by air. This was but one of his many experiences in the course of the battle. After destroying two Messerschmitts in an encounter with a large enemy formation over Ramsgate, he was successively engaged by seven

more but managed to evade their attacks without appreciable damage to his aircraft. On another occasion he chased an enemy fighter down from 17,000 feet to sea level near the French coast, where it was seen to crash.

Other fighter pilots who reported successful combats during the heavy fighting which took place in the last week of August and the first week of September included Squadron Leader Blake, who was in command of a squadron in the south-west of England, Flying Officers Tait and Ward, and Pilot Officers Horton, Lawrence, Mackenzie, Tracey, Trousdale and W. S. Williams. But it is not possible to describe all the many engagements nor to record in detail the numerous incidents which occurred—the narrow escapes from destruction at the hands of the enemy, the rescues from the sea and the bombing of the airfields from which the Hurricanes and Spitfires operated. Yet it was with enduring courage that the fighter pilots faced the increasing strain of the intensive flying and fighting demanded of them during this critical period. As one pilot wrote afterwards:

These were hectic days and the only time we saw the pilots of other squadrons was when we met in the mess during the evening after long hours in the air or at readiness. But often, just as one was becoming friendly with a pilot he would get shot down and we would see him no more. When we met the Hun we 'mixed it' well and truly. Usually we waited for a moment or two until we were in a favourable position before making

¹ Pilot Officer W. H. Hodgson, DFC; born Frankton Junction, 30 Sep 1920; radio technician; joined **RAF** Apr 1940; killed in flying accident, 13 Mar 1941.

the first attack. After that it was every man for himself. There were nearly always more Huns than ourselves. We whirled around taking squirts at as many machines as possible; sometimes when they burst into flames, the crew baled out or we were lucky enough to see where

they hit the ground; then we were able to claim victories. After the battle we would rush back to our base, tell our stories to the Intelligence Officer then ask him to get through to the hospitals to see if a friend had got any before he was shot down. I remember the German bombers, flying in tight formation, crossing the English coasts and thinking to myself that they were about to drop their bombs in England, and that I was in a Hurricane and could stop them. I dived to attack and laughed as they broke formation; the crew of one Heinkel baled out; the others sprayed me with tracer—many bullet holes in my plane that time, but within an hour the ground crews had fixed it and my Hurricane was ready for action again. Our life had a devil-may-care sort of happiness but often as we lay in the sun near our machines, waiting at readiness there were moments of great beauty; somehow the colours in the field seemed brightest and the sky the deepest blue just before taking off to meet another raid. At dusk everything became peaceful. We were all tired but happy at the thought of another day's work accomplished. Our Hurricanes stood silhouetted against the sky looking strong and confident, the growing darkness hiding their patched-up paintwork. The following morning we awoke to the roar of engines being tested for another day's work.

* * * * *

By the end of the first week in September both sides were feeling the strain of the intensive fighting. The Germans had lost just over 400 aircraft since 24 August and many of their best pilots. Nor were the British defences in a happy state. Very serious damage had been done to the fighter airfields in No. 11 Group and to their communications and ground organisation. On several occasions Manston and Lympne on the **Kent** coast were unfit for days at a time for operating fighter aircraft. Biggin Hill sector to the south of **London** was so severely hit that for a week only one fighter squadron could operate from it. After the battle Park wrote:

There was a critical period between 28 August and 5 September when the damage done to sector stations and our ground organisation was having

a serious effect on the efficiency of the fighter squadrons. The absence of many essential lines of communication, the use of scratch equipment in emergency operations rooms and the general dislocation of the ground organisation was seriously felt in the handling of squadrons to meet the enemy's massed attacks.... Had the enemy continued his heavy attacks against the fighter airfields and knocked out their operations rooms and communications, the fighter defences of **London** would have been in a perilous state....

But an even graver problem was the shortage of trained pilots, which made it difficult to keep units up to strength and relieve them when exhausted. In the fortnight from 24 August to 6 September, Fighter Command had lost 103 pilots killed and 128 seriously wounded, while 466 Spitfires and Hurricanes had been destroyed or seriously damaged. The casualties to pilots represented the loss of nearly a quarter of the total pilot strength. Their place could only be taken by new, ardent, but inexperienced men from the training units, and further casualties were incurred because of their lack of familiarity with the latest developments in the air fighting. ¹

It was at this point in the battle that the Germans unexpectedly switched the main weight of their attack to **London**. It now appears that the Germans overestimated the extent to which Fighter Command had been weakened. They were also working to a timetable which had to be completed if their invasion was to take place before the onset of unfavourable weather. In addition **Hitler** wanted reprisals against **London** for the attacks by Bomber Command on **Berlin** and other German cities. Nevertheless, this change was in every way favourable to Fighter Command, since it not only removed the strain on the fighter airfields but also allowed more time for the assembly of larger formations to meet the enemy's attacks.

The Germans now also increased the weight of the desultory and scattered attacks by night which they had been making for some weeks. It was as yet impossible to deal effectively with these attacks since both

equipment and methods of night interception were still in the experimental stage, and in the face of the great events that were unfolding by day, the aircrews engaged on the unprofitable task of combing the night skies gained little satisfaction from the knowledge that they were laying the foundation for later successes. Among the few encouraging results of the night patrols at this time was the unique achievement of Pilot Officer Herrick,² one of the small group of New Zealand airmen flying with No. 25 Blenheim Squadron against these night raiders. On the night of 4 September Herrick destroyed two German bombers within a few minutes of each other. Nine days later he sent another down in flames, thus accounting for three of the four aircraft claimed by Fighter Command in night operations during the month. All three of Herrick's victims were seen to crash by observers on the ground.

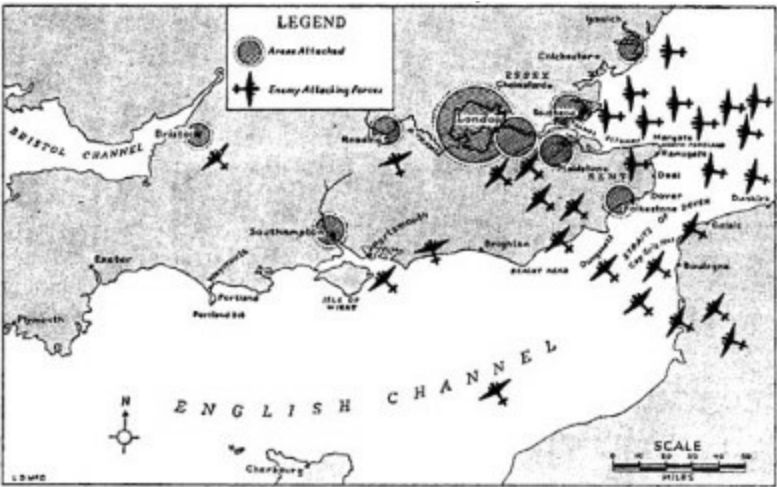
It was in the early evening of 7 September that the Germans launched their first mass daylight attack against **London**. Some

¹ By the beginning of September the incidence of casualties became so serious that a fresh squadron would become depleted and exhausted before any of the resting and reforming squadrons were ready to take its place. Fighter pilots were no longer being produced in numbers sufficient to fill the gaps.'—Air Chief Marshal Dowding's despatch on the Battle of **Britain**.

² Squadron Leader M. J. Herrick, DFC and bar, Air Medal (US); born Hastings, 5 May 1921; Cranwell Cadet, 1939; permanent commission **RAF** Mar 1940; killed on air operations, 16 Jun 1944.

400 bombers, heavily escorted by fighters, crossed the coast in successive waves, and several formations succeeded in breaking through to the East End of **London** where they started large fires in dock areas and oil storage depots. Heavy damage was also inflicted on domestic and commercial property. Ten squadrons of Spitfires and Hurricanes were in the air to intercept the raiders and bitter fighting took place over a wide

area of south-eastern England and over **London** itself. No. 501 Hurricane Squadron, led by Gibson, was hotly engaged with a force of well over 100 enemy aircraft but,



*PHASE 3: 7-27 September 1940
Day and night offensive against London*

**PHASE 3: 7-27 September 1940
Day and night offensive against **London****

being heavily outnumbered, was unable to claim any conclusive successes, although Gibson himself was credited with a probable. No. 603 Spitfire Squadron, which intercepted part of this same German formation on its way back, had better luck. Carbury led a section into part of the fighter escort and attacked a Messerschmitt, which burst into flames. Then he saw a group of bombers below him so dived and singled out the last of the formation. It went down in a steep dive. Climbing again, Carbury sighted more Germans below so dived through their formation, spraying them with bullets. Although short of petrol and ammunition he returned to the attack, firing the rest of his ammunition at a bomber which ‘began to burn and went earthwards’. Flying with No. 234 Spitfire Squadron, Pilot Officer Lawrence, after damaging a Dornier, went for one of a formation of twelve Messerschmitts which he pursued to the coast, where ‘after three bursts it caught fire and

crashed into the sea.’ These engagements were typical of the desperate and gallant efforts made by the fighter pilots during this

autumn evening to defend **London**.

During their attacks on 7 September the Germans lost 40 aircraft, but even such heavy casualties might have been accepted had they been able to repeat the successful breakthrough in strength to **London**. This, however, they were prevented from doing, their subsequent attacks being met and defeated with steadily increasing success by Fighter Command. Formations aiming towards **London** were intercepted, broken up, and forced to drop their bombs short of the capital or in its southern outskirts while, at the same time, the number of bombers destroyed rose appreciably. Although this failure of the Germans to bomb **London** heavily in daylight was due partly to the onset of autumn, with cloudier skies in which the bomber formations became separated from their fighter escorts and fell an easy prey to the British fighters, it was more the tactics employed by Air Vice-Marshal Park which prevented the enemy from achieving his purpose. Park so disposed his squadrons that the Germans were engaged early in their approach and throughout their flight over England. As always, he was determined that the enemy squadrons should be intercepted *before* they reached their objective with whatever force could be despatched in the time available.

Nevertheless his plan aroused acute controversy. In particular, Air Vice-Marshal Leigh-Mallory, in charge of No. 12 Group on the northern flank, did not see eye-to-eye with Park. He preferred to assemble large formations of fighters before sending them south in support of the battle. These did achieve successful interceptions on some occasions but by no means always; moreover it is significant that almost all their successes were scored against retreating enemy forces. This was because of the delay involved in assembling large formations of fighters drawn from several airfields. But such delay might well have been fatal. 'If the policy of big formations had been attempted at this time in No. 11 Group,' writes Air Chief Marshal Dowding in his despatch on the battle, 'many more German bombers would have reached their objective without opposition.' He might well have added that, as a result, much of **London** would have been destroyed and tens of thousands of its citizens killed. ¹

¹ In reply to a post-war critic of his tactics, Sir Keith Park made this revealing statement: 'In view of the criticism of No. 11 Group, I have no option but to record the very unsatisfactory state of affairs in my left rear occupied by No. 12 Fighter Group throughout the Battle of **Britain**. On a few dozen occasions when I had sent every available squadron of No. 11 Group to engage the main enemy attack as far forward as possible, I called on No. 12 Group to send a couple of squadrons to defend a fighter airfield or other vital targets which were threatened by outflanking and smaller bomber raids. Instead of sending two squadrons quickly to protect the vital target No. 12 Group delayed while they despatched a large Wing of four or five Squadrons which wasted valuable time.... Consequently they invariably arrived too late to prevent the enemy bombing the target.

'On one occasion I asked for two squadrons to protect North Weald fighter aerodrome from an approaching raid. No reinforcing squadrons arrived from No. 12 Group before this vital station was heavily bombed with loss of life and destruction of hangars, workshops, operations room, etc. On another occasion, No. 12 Group was asked to send a couple of squadrons to protect the fighter station at Hornchurch, but again no reinforcements arrived in time to prevent heavy bombing of this aerodrome....

'On scores of days I called on No. 10 Fighter Group on my right for a few squadrons to protect some vital target. Never on any occasion can I remember this group failing to send its squadrons promptly, to the place requested, thus saving thousands of civilian lives and also the naval dockyards of Portsmouth, the port of Southampton and aircraft factories.

'After further experience as commander of the air forces in **Malta**, in the Middle East and lastly on the **Burma** front, I say that we should have lost the Battle of **Britain** if I had adopted the "withholding" tactics of No. 12 Group.'—From an article in the *New Zealand Herald*, dated 9 September 1952.

In the many encounters which occurred during these attacks towards **London**, New Zealand fighter pilots continued to score successes. On 8 September Flight Lieutenant W. G. Clouston was leading

No. 19 Spitfire Squadron on patrol over south-west London when they were directed towards a formation of Messerschmitts. He afterwards reported:

.... Was about to attack when two crossed my sights so turned on them. The rear one emitted smoke after a short burst and then caught fire. Attacked the second firing the rest of my ammunition, saw my shots register and he went down apparently out of control.

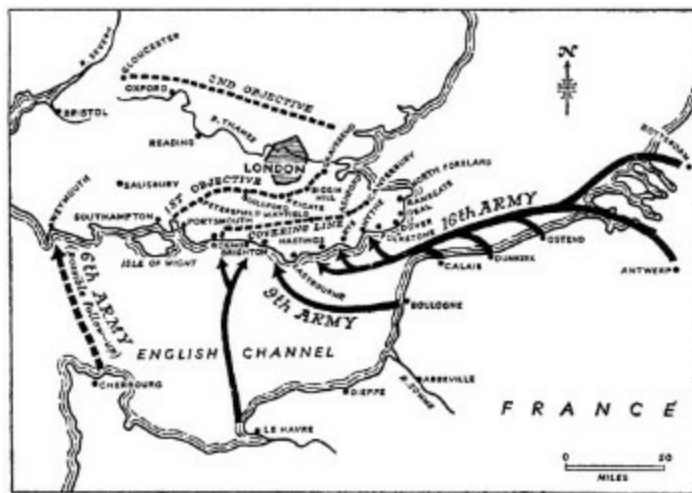
In the same engagement Pilot Officer Bush ¹ saw the Messerschmitt he attacked go down in flames and break up. In the late afternoon of 11 September several New Zealanders were with the squadron which intercepted an enemy formation south-east of the capital. It consisted of some forty bombers well protected by a box-like force of fighters. Nevertheless, the Spitfires broke through to the bombers and were able to claim ten of them. Pilot Officer Mackenzie saw his victim glide down and force-land. Carbury concentrated on a Heinkel which became separated from its formation; his first burst hit one of the engines, and subsequent attacks caused the undercarriage to fall out and pieces broke off its nose. At the same time a second attack was pressing towards London from the south-east. Squadron Leader Blake and Pilot Officer Verity ² were with the squadrons which met the enemy over Brooklands and both men reported successful combats. One enemy bomber formation on being attacked immediately turned and fled southwards, jettisoning its bombs to make good its escape.

¹ Squadron Leader C. R. Bush, DFC; born Wellington, 7 Feb 1918; assurance agent; joined RAF Sep 1939; transferred RNZAF Mar 1946; killed in aircraft accident, 30 Nov 1948.

² Squadron Leader V. B. S. Verity, DFC; Temuka; born Timaru, 5 Nov 1918; joined RAF May 1939; transferred RNZAF Dec 1943; commanded No. 650 Sqdn, 1943–44.

The morning of Sunday, 15 September, after the early mists had

dispersed, was clear and bright and two major attacks were launched against **London** during the day. Both were heavily defeated, superb interception preventing all but a few aircraft from reaching the capital. Of the New Zealand pilots engaged, six had successful combats and among them claimed eight aircraft destroyed. Flight Lieutenant W. G. Clouston shot down one of these over the approaches to south-east **London** whilst leading No. 19 Squadron against the first attack of the day, and a second during the heavier



OPERATION SEALION
German Plan for Invasion of England

OPERATION SEALION
German Plan for Invasion of England

raid in the afternoon. This later attack was launched in several waves, the first of which was met south of Canterbury by the Spitfires of the **Hornchurch Wing**. Pilot Officer Lawrence was with No. 603 Squadron which engaged the fighter escort. He sent one Messerschmitt spinning down and then attacked a further two fighters, damaging both of them. The same enemy force was later intercepted near the Thames Estuary by Nos. 41 and 92 Squadrons with which Pilot Officers Mackenzie and Hill ¹ were flying. They reached the bombers in spite of the fighter escort. Mackenzie set fire to one Dornier, and Hill, after his initial attack,

¹ Pilot Officer H. P. Hill; born **Christchurch**, 17 Apr 1920; joined **RAF** Jan 1939 killed on air operations, 20 Sep 1940.

saw one of the crew bale out and the bomber catch fire. He then attacked another Dornier which crashed into the edge of a wood on the south side of the Estuary and exploded. During the pursuit of the now retreating enemy, Hill scored hits on a third bomber which crashed near Rochester. Meanwhile, Blake had been in action over Kenley. Leading his squadron to attack, he got a good burst on a Dornier which subsequently crashed on an airfield in **Sussex**. Turning to continue the attack, he found his windscreen covered with oil from a pipe severed by an enemy bullet, so he glided down to force-land and found himself alongside his victim. Another enemy bomber crashed near the same airfield as a result of attacks by Pilot Officer G. M. Simpson, whose squadron was simultaneously engaged with some thirty Heinkels in that area.

Altogether the day's operations were disastrous for the enemy. ¹ The bitter opposition which his formations encountered and their failure to break through to **London** were to have a decisive effect on **Hitler's** plans for invading **Britain**. These plans had been maturing steadily over the past month, and by this time the assembly of ships and barges in the Channel ports was almost complete. But the gathering of this armada had not been allowed to proceed without interruption as, from the beginning of September, a large part of the effort of Bomber and Coastal Commands had been directed against the assembly points. Considerable damage was done, including the sinking of a number of ships and barges. This was not without its effect on the German Naval Command who were responsible for getting the invading forces across the narrow seas, and on 10 September the Naval Staff reported to Hitler: 'The timely conclusion of the preparations is endangered by further difficulties and stoppages resulting from enemy action.' On 13 September 80 barges were sunk at Ostend, and the following day **Admiral Raeder** reported, 'The present air situation does not provide conditions for carrying out the operation as the risk is still too great.' Concern at the failure of the **Luftwaffe** to beat down the British air defences increased among the High Command, and on 17 September **Hitler**, already uncertain, was persuaded to postpone the invasion to an indefinite date. An entry in the

German War Diary for that day reads: ‘The enemy **Air Force is still by no means defeated; on the contrary, it shows increasing activity.**

... The Fuehrer therefore decides to postpone Operation Sea Lion (i.e., the invasion) indefinitely.’ At the same time, ‘air

¹ German records reveal that they lost 56 aircraft, the second highest total for the battle. British losses this day were 27.

attacks against **London are to be continued and the target area extended against military and other vital installations.’ ¹**

But although the daylight attacks continued, they became intermittent and steadily diminished in intensity while the night raids became heavier. All the same, the strain on the day fighter squadrons remained considerable for, in addition to increasing autumn cloud, the tactics now employed by the enemy made interception more difficult. In an attempt to divert the fighter patrols from attacking his bombers he used high fighter screens. The bomber formations also operated at varying heights and came over on a much wider front than previously—tactics which greatly increased the difficulty of obtaining accurate advance information of the enemy’s approach. Nevertheless it was only occasionally that single aircraft or a small group got through to **London by day, largely owing to successful counter tactics evolved by Park and his staff at No. 11 Group headquarters. Reconnaissance by single aircraft was instituted to supplement the information received from other sources, and the fighter squadrons were so disposed that the Spitfires had time to climb to engage the high-flying fighters while the Hurricanes dealt with the bombers and their close escort. Other squadrons formed a third and inner screen. The daylight defence of **London** thus remained secure.**

Many of the combats fought during the last fortnight of September took place over four miles above the towns and fields of south-east

England, when all that could be seen from the ground was the strange pattern of vapour trails which the aircraft wove as they circled and fought. The physical strain of fighting at such high altitudes proved very exacting, but in spite of this the British pilots inflicted increasingly heavy losses on the enemy.

Throughout this phase of the battle New Zealand airmen continued to take part in patrol and interception and to distinguish themselves in combat. On 18 September Hill destroyed an enemy bomber in an engagement which began nearly four miles above the spires of Canterbury Cathedral. He was flying in a section of four Spitfires when they sighted 20 Junkers 88s:

The enemy formation broke up and dived for the coast. I attacked one, following it through cloud and out to sea. Exhausted ammunition in a final attack. Both its engines stopped and it pancaked on the water, about seven miles from the coast. Directed motor boat to pick up crew.

¹ There was much speculation later as to whether an actual landing had not, in fact, been attempted. But the widespread rumours that the Germans had been repelled with heavy losses probably owed their origin to an incident which occurred during August, when the Germans were practising embarkations in barges along the French coast. Some of these barges had put to sea in order to escape British bombing; they were sunk either by bombing or bad weather and the corpses of about forty German soldiers were washed up at various points along the south coast of England.

Another bomber from this force was destroyed by W. G. Clouston, while on the same day Pilot Officer Bush of No. 242 Squadron reported the destruction of one of six enemy fighters encountered at 17,000 feet:

While trying to climb and attack one of the rear machines their leader did a quick turn and dived on me. Put my aircraft into a spin and then dived but found one Messerschmitt still following me, so did a sharp turn and managed to manoeuvre into good position behind him. After one

long burst, saw enemy break up and crash into the sea near **Dover**.

But often the combats were inconclusive or else pilots were unable to confirm the destruction of the enemy because of cloud or the height at which they were flying. Many reports contain such remarks as:

‘Enemy aircraft fell away in a spin and was still spinning on entering cloud....’ or

‘Aircraft went down vertically but did not see it hit the sea.’

BRITISH AND GERMAN AIRCRAFT LOSSES
10 July to 31 October 1940

Weekly Totals	British fighters lost (<i>complete write-off or missing</i>)	Enemy aircraft actually destroyed (<i>according to German records</i>)	Enemy aircraft claimed at the time
July 10–13	15	45	63
July 14–20	22	31	49
July 21–27	14	51	58
July 28– August 3	8	56	39
August 4–10	25	44	64
August 11–17	134	261	496
August 18–24	59	145	251
August 25–31	141	193	316
September 1–7	144	187	375
September 8–14	67	102	182
September 15–21	52	120	268
September 22–28	72	118	230

22-28			
September 44		112	100
29-			
October 5			
October 47		73	66
6-12			
October 29		67	38
13-19			
October 21		72	43
20-26			
October 21		56	60
27-31			
	—	—	—
	915	1733	2698

The closing days of September saw the last of the enemy's attempts to reach **London** with large formations of bombers, and a distinct change of strategy followed almost at once. Long-range bombers were practically withdrawn from the daylight battle and Messerschmitt fighters, some of them carrying small bombs, were now employed in small but widespread attacks. Such raids were difficult to intercept and demanded further intensive activity on the part of the fighter squadrons, including the maintenance of 'standing' patrols over **Kent**, which were very wearing and often unproductive. Nevertheless the Germans could not hope to secure any decisive result by this last change of tactics. It was, in fact, an admission of failure, confirmed when, on 12 October, **Hitler** finally postponed his invasion 'until the following Spring'. Yet the enemy's activity over **Britain** did not cease with this decision, so that it was some time before many of the defenders realised what they had achieved—the defeat of the German attempt to gain mastery of the air over England and the disruption of **Hitler's** plans for invasion.

Meanwhile, as the tide of battle ebbed slowly away, the fighter pilots continued to fly many and varied patrols, and although the interception of the fast, high-flying fighters and fighter-bombers was very difficult, there were many occasions on which this was achieved. Carbury was again prominent among those who had successful combats during this

last stage of the battle. After an engagement over **Kent** on 7 October, he reported that ‘... the Messerschmitt, after two bursts went straight into the ground.’ Three days later he was leading a section of his squadron when they sighted 20 Messerschmitts over the Channel heading for **France**. The Spitfires attacked and Carbury saw his victim dive into the sea. A moment later he caught sight of another enemy fighter trying to climb above him, so he went up after it and attacked. The German machine went down vertically. Carbury followed and saw it crash on the beach at **Dunkirk**. One wing flew off and the rest of the aircraft shot along the sand.

On 12 October Flying Officer Rabone ¹ sent one of two Messerschmitts with which he was engaged spinning down to crash into the sea off the English coast. The enemy fighters had approached out of the sun and it was only by skilful tactics that Rabone was able to turn the tables on his assailants. At one stage he found himself in a tight circle with both enemy aircraft, and it was not until one of them broke out of this circle that he was able to attack it and, at the same time, evade the attentions of the other. Pilot

¹ Squadron Leader P. W. Rabone, DFC; born Salisbury, England, 2 Mar 1918; joined **RAF** Mar 1939; transferred **RNZAF** Mar 1944; killed on air operations, 24 Jul 1944.

Officer Trousdale played the opposite role when he destroyed another Messerschmitt towards the end of the month. He dived on three of the enemy from out of the sun and, singling one out, delivered his attack; the Messerschmitt went down vertically and exploded in flames on the ground below. About the same time Pilot Officer I. S. Smith was on local flying practice when he was directed to engage a lone reconnaissance aircraft. Smith climbed and eventually sighted a Heinkel, then after a long chase through cloud, during which he scored repeated hits, had the satisfaction of seeing the enemy land in the sea close to Skegness. Among other successes by New Zealand pilots during October 1940 was the shooting down of a Messerschmitt into the sea by Pilot Officer Wells,

¹ while another enemy fighter was claimed by Flying Officer Mackenzie after he had pursued it out over the Channel and set it on fire. Flying Officers Hayter ² and G. M. Simpson also reported successful engagements during October.

Before the end of the month British fighter pilots were beginning to fight again over the Channel and even over the beaches of **France** and **Belgium**, chasing German raiders on the run. The enemy had now lost the initiative, and as the weeks passed his activity in daylight showed a steady decline. The victory had come slowly and only after the most exhausting efforts, but it was none the less decisive. It was a victory for which a few hundred fighter pilots were primarily responsible; while the battle was at its height, Winston Churchill had paid them his memorable tribute.

It should not be forgotten, however, that their skill and courage would have been unavailing without the ground organisation which served them so well, or without the machines which the skill of designers and aircraft engineers had provided. Indeed, the defeat of the **Luftwaffe** in 1940 was only made possible by the efforts of that small band of men who early took thought for the Empire's need and quietly laboured to prepare against the day of trial. It was these men who gave Fighter Command the technical superiority, particularly in radio-location and in the firepower and rate of climb of the Spitfire, which, combined with superior strategy and the fine qualities of the British pilots, overcame an almost overwhelming numerical strength under conditions that were largely favourable to the attacker.

¹ Wing Commander E. P. Wells, DSO, DFC and bar; **RAF**; born **Cambridge**, 26 Jul 1916; farmer; joined **RNZAF** Oct 1939; commanded No. 485 (NZ) Sqdn, 1942; Wing Leader, Kenley, 1942–43; Wing Commander, Training, No. 11 Fighter Group, 1943–44; Wing Leader Tangmere, Detling, West Malling, 1944; commanded Fighter Leader School, Central Fighter Establishment, 1944–45.

² Squadron Leader J. C. F. Hayter, DFC and bar; **Nelson**; born **Canterbury**, 18 Oct 1917; joined **RNZAF** Nov 1938; transferred **RAF** Aug 1939; retransferred **RNZAF** Aug 1944; commanded No. 274 Sqdn, **Middle East**, 1942; No. 74 Sqdn, ME and **Europe**, 1943–44.

On the German side there had not been anything like the same careful preparation. The aerial campaign against **Britain** was launched after a few weeks' planning by forces lacking the technical equipment with which they could be used to the best advantage. At this time the Germans had no ground-to-air control system. This meant that when taking their squadrons into action the German leaders had no information regarding the movements of the opposing forces such as was enjoyed by the **RAF** commanders. Moreover communication between aircraft was often difficult, for their radio-telephone was inferior to the British. It was only after the battle started, when they heard commands skilfully and accurately directing Spitfires and Hurricanes on to their formations, that the German pilots realised their handicap.

The Germans also began the Battle of **Britain** with a fighter production that was not fully capable of meeting heavy losses, and so confident were they of early success that their production of fighters remained static throughout the battle. But among the many factors which can be discerned as contributing to the defeat of the **Luftwaffe**, probably the most outstanding was the failure of the German Air Staff to appreciate the vital significance of the British early warning radar system and its possibilities when employed in conjunction with ground-to-air control of the defending fighter squadrons. The early attacks on coastal radar stations caused serious damage and, had they been maintained, might well have proved decisive. Yet it is recorded that on 15 August, at an early stage in the battle, Goering declared: 'It is doubtful whether there is any point in continuing the attacks on radar stations, since not one of those attacked has so far been put out of action.'

A fundamental weakness in German air strategy and policy was also revealed during the assault on **Britain**. Over-emphasis on the doctrine of attack had led to a relative weakness in the fighter arm of the **Luftwaffe** as compared with the bomber and dive-bomber forces. Then, when the latter began to suffer heavy losses, there was a wasteful use of the limited fighter strength as close escort which led to bitter and disastrous quarrels at a crucial point in the battle. The fighter leaders wanted to continue an escort system embodying loose formations and free-lance patrols, but the bomber men demanded closer escort in tight formations. Goering intervened to support the bomber men and the fighters were ordered to fly to a rigid battle plan laid down before take-off. This naturally aroused feelings of resentment and frustration among the German fighter pilots, who saw the entire planning and conduct of the offensive now being dominated by the bomber experts. How strong their feelings were on this matter is revealed in the testimony of General Adolf Galland who, as a major, led one of Goering's fighter wings during 1940 and was later to command the German Fighter Arm.

We saw the whole of our experience from the Spanish war onwards being thrown away,' he declares. 'We had to fly straight-and-level with the slow unwieldy bomber stream and were forbidden to engage British fighters unless we were attacked. This meant we were compelled to surrender to the Spitfires and Hurricanes the advantage of surprise, initiative, height, speed and, above all, the fighting spirit and aggressive attitude which mark all successful fighter squadrons.'

Galland also reports an interesting episode. On one occasion when he protested against the new orders, Goering turned on him and asked sarcastically just what kind of fighters he would like to have. 'Reichsmarschall,' he replied, 'give me a squadron of Spitfires.' The remark became legendary in the **Luftwaffe** and stimulated a lasting respect for the Spitfire.

Undoubtedly the German fighter pilots had reason to complain. In addition to the false policy of escort, the twin-engined Messerschmitt

110 was proving inadequate in fighting power for long-range escort and the single-engined Messerschmitt 109 did not have sufficient endurance to press the battle to the **London** area and beyond. But the real difficulty lay in the fact that the armament of the German bombers which, in conjunction with their speed, had been relied upon to offset any deficiency in fighters, proved inadequate when tested in the hard fighting over **Britain**. Certainly the Germans failed to take sufficient account of the fighting qualities of the Spitfire and Hurricane which had first become evident in **France** and over **Dunkirk**, and their machines were outclassed by those very qualities in combination with the British system of radar plotting and fighter control.

But, above all, in judging the German campaign against **Britain**, it must be realised that after the early victories on the Continent, opinion in the **German Air Force** ignored the possibility of serious opposition to the great and powerful **Luftwaffe**. Rapid and easy successes had prejudiced judgment of the fighting capabilities of the **RAF**. Goering himself, at the height of his power, was dazzled by his own self-esteem, and both he and the whole of the **Luftwaffe** were subconsciously affected by the outpourings of Goebbel's propaganda department. Only a few of the fighter men had begun to see the possibility of a tough adversary in the Spitfire and Hurricane; but they kept their opinions to themselves for, at that time, anybody who so much as hinted at the possibility of a fighter superior to the Messerschmitt incurred the risk of the serious disapproval of his superiors.

In the almost universal mood of optimism the fact that the **Luftwaffe** might meet a new set of conditions over England was ignored. The experience of escorted bomber formations during the campaign in **France** was thought to be adequate, and consequently the Battle of **Britain** was begun without further training or careful preparation of tactics. When the new conditions were met, the inevitable result was confusion, friction and conflicting opinions. Improvisation followed, with the Germans groping their way from one form of tactics to another in an effort to achieve success.

But by early October it was clear that the battle was lost to the **Luftwaffe**. The original objectives had already been discarded and now the Germans resorted to attacks on industrial cities, ports, and shipping in the hope of wearing down the British people to the point of capitulation. Concentration of effort gave way to dispersion and there began a long war of attrition. The RAF could now feel more assured of its outcome but Goering and his men, who only three months previously had looked forward to the air battle eagerly and confidently, regarded future operations with considerably less enthusiasm. The wings of the German eagle had been badly bruised and its flight was now less sure and steady.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 5 – BOMBING AND RECONNAISSANCE, 1940

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Bombing and Reconnaissance, 1940

DURING the first year of war the weakness of the British bomber force and the course of events in **Europe** combined to prevent the launching of any effective bombing offensive against **Germany**. At the outset moral scruples and fears of retaliation had led the British and French to declare restrictions on the bombing of other than ‘purely military objectives’, and so anxious were they not to undertake any action that might be interpreted as an attack on civilians, that attacks against targets in **Germany** were practically ruled out during the first seven months of the war. The German bombing of **Rotterdam** on 14 May 1940 was held to release the Allies from any obligation to restrict their targets, but the development of the land battles in **Belgium** and **France** demanded the employment of the bomber squadrons in close support of the ground forces; then, shortly afterwards, the invasion threat to the **British Isles** required their return to a defensive role. Nevertheless, as opportunity offered, attacks were made on targets in **Germany** and, following **Italy**’s entry into the war on 10 June, British bombers flew over the Alps to attack the industrial centres in the north of that country.

Among the crews of the aircraft which carried out these early missions were men from every part of the Commonwealth, although at this early stage the New Zealand representation, particularly among the pilots, was relatively high. By September 1940 a total of 220 airmen from the Dominion had served with Bomber Command. Casualties were heavy and just over one quarter of this number had lost their lives, while others had been made prisoner of war. Throughout this first year two of the bomber groups were commanded by New Zealanders, Air Vice-Marshal MacLean and Coningham—both veterans of the First World War. MacLean was in charge of No. 2 Blenheim Group based in East Anglia, while Coningham commanded No. 4 Whitley Group in **Yorkshire**. This latter formation was, in fact, commanded by a New Zealander throughout the war, for when Coningham went to the **Middle East** in

June 1941 he was succeeded by Air Vice-Marshal Carr. Three of the squadrons in Bomber Command were also led by New Zealanders during the first year, No. 9 Wellington Squadron by Wing Commander McKee, No. 77 Whitley Squadron by Wing Commander G. T. Jarman,¹ and No. 75 Wellington Squadron by Wing Commander Buckley.

Some of the first bombing raids of May 1940 were directed against oil plants and marshalling yards in the Ruhr, which at that time was immediately behind the land battle. The rapidity of the German advance was not foreseen and it was hoped that the bombing might achieve two objects—some dislocation of enemy war industries and the disruption of supplies to the forces moving forward into **Belgium** and **France**. In the event it did neither. The early attacks by small forces of aircraft were mere pinpricks and did not seriously affect the German war machine or prevent supplies reaching the armies and air forces engaged on their rapid subjugation of Western Europe. This was no fault of the aircrews of Bomber Command who flew with great courage and determination in the face of all kinds of difficulties. Nor was the idea of attacking the enemy's communications and oil supplies fundamentally unsound, as the events of later years were to demonstrate. But in 1940 a much heavier effort was needed even to delay the German advance, and neither **Britain** nor **France** had sufficient crews or aircraft to make that effort.

The first major bombing raid against **Germany** was launched on the night of 15 May 1940 when oil plants in the Ruhr were the main objectives for a force of 80 aircraft, which included six Wellingtons from No. 75 New Zealand Squadron. Further raids on oil installations and marshalling yards in the Ruhr were made during the following weeks, but they were intermittent owing to frequent calls for close support by the land forces fighting in **Belgium** and **France**. The diversity of operations undertaken during the Battle of **France** and some of the difficulties which the bomber crews encountered are illustrated by the following record of sorties made by one New Zealand bomber pilot during this critical period:

May 20 Bombing raid on Ribemont Bridge. Stick of bombs fell alongside bridge but actual damage unobserved. Slight anti-aircraft fire and considerable searchlight activity.

May 22 Attack on railway junction at Huson. Bombs fell near target. Approaches guarded by searchlights which made accurate bombing difficult.

May 24 Target was rail and road junction at Aulnoye. Haze prevented clear definition of target and searchlights again made accurate bombing difficult.

¹ Air Commodore G. T. Jarman, DSO, DFC; **RAF**; born **Ashburton**, 20 Feb 1906; joined **RAF** 1930; permanent commission 1936; CGI, No. 2 FTS, 1939–40; commanded No. 77 Sqdn, 1940–41; No. 76 Sqdn, 1941; No. 19 OTU, 1941–43; **RAF** Station, Wigtown, 1943; DCAS, **RNZAF**, 1943–44; AOC No. 229 Group, ACSEA, 1945.

May 25 Raid on oil refinery, **Mannheim**. Target attacked from 9000 feet. Considerable cloud and generally poor visibility.

May 27 Attacked marshalling yard, **Dortmund**, from 10,000 feet. Bombs observed to fall near southern end of target. Intense searchlight activity.

June 1 Target was oil plant in Ruhr. Adverse weather made identification of target impossible. Forty minutes spent searching area without result. Bombs brought back to base.

June 3 Raid on oil plant at Homberg. Attack made from 10,000 feet. Anti-aircraft fire and intense searchlight activity.

June 5 Attack on tank and stores concentrations in Forest of Gobain. No target presenting itself, bombed alternative target in a marshalling yard at Rheydt.

June 8 Objective was enemy communications in vicinity of Libramont, **France**. Bombs dropped on roads where troop concentrations were expected. No results seen.

June 9 Raid on road and river crossings at Chateau Thierry. Bad weather, low cloud—bombs burst near the railway junction.

New Zealand airmen were among the crews of the force of Whitleys and Wellingtons detailed to make the first attack on **Italy** following the declaration of war by that country. Industries in Turin and Genoa were the targets for this raid, which was made on the night of 11 June. Unfortunately the attack proved abortive. The majority of the 36 Whitleys did not reach **Italy** because of heavy storms encountered over the Alps, while the twelve Wellingtons, six of which were from No. 75 Squadron, did not leave the ground at all. They had flown from England to an advanced base in the south of **France** early in the day, but so anxious were the French to avoid provoking the Italians to retaliation that they drove lorries and carts on to the airfield to prevent the Wellingtons from taking off. The aircraft then returned to England. After several days of recrimination, permission was finally given for the airfield at Salon to be used, but the capitulation of **France** prevented the development of heavy attacks on **Italy** for some considerable time. A few raids were attempted during the autumn by the Whitley squadrons from bases in England, but they were aimed at lowering morale rather than inflicting material damage. The distance and the formidable barrier of the Alps were almost insuperable obstacles at this stage of the war.

With the collapse of **France**, the Commander-in-Chief Bomber Command, Air Marshal Portal,¹ was anxious to begin the strategic

¹ Marshal of the Royal Air Force Viscount Portal, KG, GCB, OM, DSO and bar, MC, Order of Polonia Restituta (Pol), Order of St. Olav (Nor), Order of the White Lion (Czech), Distinguished Service Medal (US), Order of St George (Gr), Order of the Netherlands Lion (Hol), Order of the Crown with Palm and Croix de Guerre with Palm (Bel); England; born **Hungerford**, Berks, 21

May 1893; joined **Royal Engineers**, 1914; seconded RFC 1915 and **RAF** 1918; permanent commission **RAF** 1919; Air Council Member for Personnel, 1939–40; AOC-in-C, Bomber Command, 1940; CAS, **RAF**, 1940–45.

bombing of **Germany** in accordance with the long-term plans drawn up before the war. Portal had joined the **Royal Engineers** as a despatch rider in August 1914, and for two and a half years served in **France**, first as a sapper then, in 1915, as an observer officer with the **Royal Flying Corps** and finally as a pilot. His record as a fighter pilot was hardly surpassed; in 1917 he won both the MC and DSO and the following year a bar to the DSO. One of his many adventures was to take on five enemy machines at once and shoot down three of them. In the years between the wars he commanded a notable bomber squadron and came to be regarded within the service as an expert in bombing practice and a foremost exponent of the theories which were to have a powerful influence on the operations of the **Royal Air Force** during the Second World war. 'In Bomber Command,' he declared in July 1940, 'we have the one directly offensive weapon in the whole of our armoury, the one means by which we can undermine the morale of a large part of the enemy people, shake their faith in the Nazi regime and at the same time dislocate the major part of their heavy industry, much of their chemical industry and a good part of their oil production.'

It had already been decided that the main effort should be directed against the German aircraft industry, oil producing plants and communications, but it was soon found that many of the targets were difficult to locate at night. As one New Zealand bomb-aimer wrote at this time: 'It is very difficult to pick up targets except on clear moonlight nights, and we don't get many of them. One night we ran into bad weather while looking for a place at **Hamburg**. We flew over cloud all the way there and shot far over our mark and out into the Baltic. Turning back we found ourselves over **Kiel** at about 2000 feet and they let off everything they had at us. We got away as quickly as possible but had to return without finding our target.'

On the other hand, daylight penetration to any depth had already proved too costly. In these circumstances, objectives on the fringe of enemy and occupied territory received most attention. The **Blenheim** light bombers were sent to attack aerodromes and ports in the Low Countries, targets which were also given to the Wellingtons, Whitleys, and Hampdens as secondary objectives to those in **Germany**. With the lack of facilities for navigation by night, many of the heavier bombers were also forced to bomb such targets. Altogether there was much dispersion of effort. Furthermore the forces sent to bomb the various targets were relatively small and their total bomb-load negligible, while the German repair organisation was exceedingly efficient. This was the period when the German town of **Hamm** was frequently mentioned in communiques, for it possessed one of the largest railway marshalling yards in **Germany**. Among the bomber crews it became known as the 'Ham and Egg' run, 'egg' being **RAF** slang for a bomb. But there were many marshalling yards in the Ruhr area and it is doubtful whether the attacks on **Hamm** in 1940 had any appreciable effect on the running of the German railways.

In these early raids enemy opposition was, on the whole, slight. Heavy anti-aircraft fire was not often encountered and as yet few German night fighters sought to intercept the bombers. However, there were other hazards. The bombers often flew through dense cloud in the bitter cold of the higher altitudes, over a totally blacked-out country, to be met here and there by searchlights groping through the darkness or by sudden barrages of flak. It was not easy to navigate accurately under such conditions. The bomber, affected by constantly changing winds, rarely flew in a straight line—almost always it moved through the air at an angle, like a boat crossing a swift-flowing river. This drift could only be measured in relation to objects on the ground, so that when the aircraft was forced to fly over heavy cloud for hundreds of miles the navigator could only obtain an approximate position by observation of the stars. The most difficult part of the flight often came at the end of some eight or nine hours' flying, when crews were tired and sometimes half frozen. There was always the return passage across the North Sea

where, if the aircraft was damaged, difficulties might develop and lead to a forced landing in the water. When the English coast was reached, too often it would be to find the countryside blanketed in low cloud, fog or mist. Many lives were lost through crews losing their way over hilly country; with his machine running short of fuel the pilot would reduce height in an effort to get some idea of his position, only to crash into high ground.

During these early operations when the location of precise objectives proved more difficult than had been anticipated, aircrews displayed considerable initiative in finding alternative targets. Typically, one night in July Flight Lieutenant Adams, captain of a Wellington from No. 75 Squadron, finding his target obscured by cloud, bombed two supply trains in the marshalling yards at Soltau. His crew saw large fires break out in both trains. Some weeks later, returning from an attack on the Ruhr, Adams noticed night-flying training in progress at an enemy airfield. He attacked an aircraft which was preparing to land and had the satisfaction of seeing it dive straight to the ground and burst into flames. During one of his early sorties as a bomber captain, Pilot Officer Denton ¹ determined to attack an alternative target on the coast rather than bring his bombs back. After a lengthy search he found the harbour of

¹ Wing Commander F. H. Denton, DFC and bar; **London**; born **Greymouth**, 23 Apr 1917; surveyor; joined **RAF** Jan 1940; commanded No. 487 (NZ) Sqdn, 1945.

Flushing and dived through a curtain of anti-aircraft fire to attack the docks. The explosion of the bombs rocketed the Wellington several hundred feet upwards, but Denton and his crew were rewarded by seeing fires start. Although their machine was badly damaged with gaping holes in each wing, they brought it safely back to base.

The New Zealand Squadron took a prominent part in this early offensive, regularly despatching aircraft from its base at Feltwell in

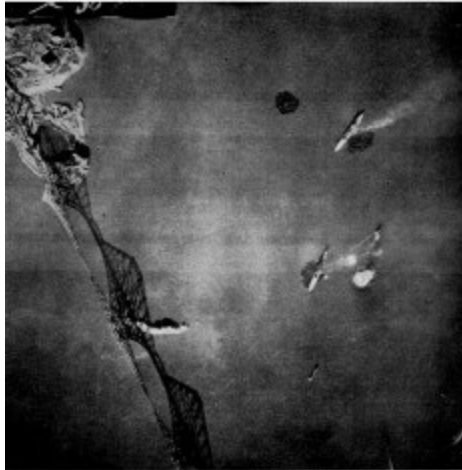
Norfolk to bomb a wide variety of targets. While these included many of the type usual at this period, such as oil plants and communications, more unusual places visited by the squadron were the docks at **Bremen**, **Emden** and **Wilhelmshaven**, explosive factories at **Cologne**, and a forest south of Freiburg where it was suspected that the Germans had ammunition dumps. The squadron also took part in the first large-scale attack against **Berlin** on the night of 23 September 1940, when just over 100 aircraft were despatched to attack the German capital as a reprisal for the raids on **London**. No. 75 Squadron sent six Wellingtons, four of which reported finding this distant target—no mean feat at this period. Although greeted by considerable anti-aircraft fire, all four were able to drop their bombs within the target area and return safely. Outstanding incidents during these months were few compared with the number of raids made by the squadron. On one occasion a Wellington narrowly escaped disaster in a severe thunderstorm over **Germany**, while on another night a crew had a lucky escape after a crash landing on the east coast of England. The weather was bad and they had brought back their bombs, which exploded, completely destroying the aircraft, just after the crew had left it.

It was towards the end of July that the squadron had its first serious encounter with enemy night fighters when the Wellington captained by Flying Officer N. Williams was attacked by three Heinkels during its return flight from the Ruhr. In the running fight which followed one enemy aircraft was set on fire and seen to crash, a second was reported as badly damaged, and the third driven off. Although his machine was riddled with holes, Williams managed to get it back safely across the North Sea. On the same night, however, another Wellington piloted by Flying Officer Watson ¹ was lost over **Germany**, and a few nights later Flying Officer Coleman, one of the original members of the squadron, also failed to return, making the third loss suffered by the squadron since operations began. The first had been the loss of the Wellington captained by Flying Officer Collins on 21 May 1940. Altogether, between June and September 1940, 245 sorties were despatched



Anson on convoy patrol
Anson on convoy patrol

German bombers struck at the British Fleet in the Firth of Forth on 16 October 1939. This German photograph shows a direct hit on the cruiser *Southampton* (middle) and a near miss on the *Edinburgh*

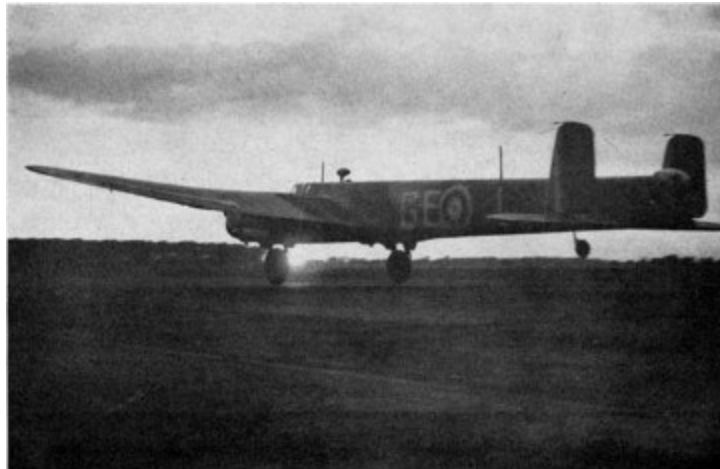


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Original members of New Zealand Flight, No. 75 Squadron

Original members of New Zealand Flight, No. 75 Squadron



A Whitley of Bomber Command takes off on a leaflet raid. Whitley aircraft were later used by Coastal Command in anti-submarine patrols

A Whitley of Bomber Command takes off on a leaflet raid. Whitley aircraft were later used by Coastal Command in anti-submarine patrols



Ground crews coaxing the propeller of a Battle bomber on an airfield in France

Ground crews coaxing the propeller of a Battle bomber on an airfield in France



Flying Officer E. J. Kain, DFC

Flying Officer E. J. Kain, DFC



The town of Narvik

The town of Narvik



The wreckage of a Dornier 17 bomber brought down in a French cornfield during the air battles of the record week of May 1940

The wreckage of a Dornier 17 bomber brought down in a French cornfield during the air battles of the record week of May 1940



Low-level attack by Battle bombers on a German convoy in France

Low-level attack by Battle bombers on a German convoy in France



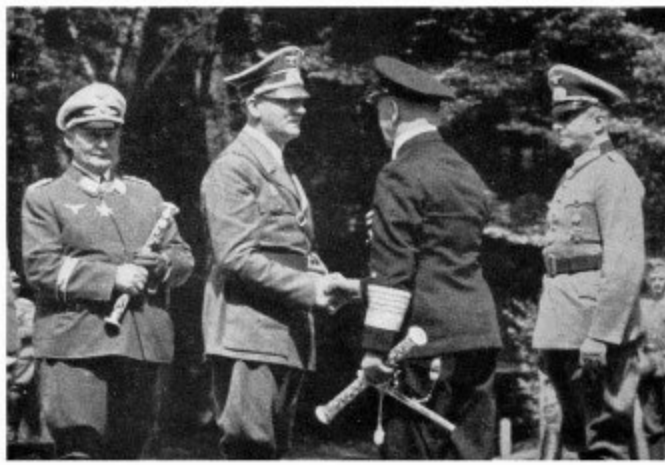
Burning oil depots at Dunkirk

Burning oil depots at [Dunkirk](#)



British troops on the beach at Dunkirk waiting to embark

British troops on the beach at [Dunkirk](#) waiting to embark



The German leaders, June 1940. Hitler with Goering (left), Raeder, and Keitel (right) in the forest of Compiègne on the occasion of the signing of the terms of surrender by the French

The German leaders, June 1940. Hitler with Goering (left), Raeder, and Keitel (right) in the forest of Compiègne on the occasion of the signing of the terms of surrender by the French



A German photograph of a Heinkel III dropping its bombs during the Battle of Britain

A German photograph of a Heinkel III dropping its bombs during the Battle of Britain



A German photograph of a direct hit on the oil storage tanks at Purfleet, near Tilbury on the Thames

A German photograph of a direct hit on the oil storage tanks at Purfleet, near **Tilbury on the **Thames****



Vapour trails over Westminster

Vapour trails over Westminster



His Majesty
the King
with Flight
Lieutenant
A. C. Deere,
DSO, OBE,
DFC and bar,
DFC (US),
Croix de
Guerre

**His Majesty the King with Flight Lieutenant A. C. Deere, DSO, OBE, DFC and bar, DFC (US),
Croix de Guerre**



Pilot Officer C. F. Gray,
DSO, DFC and two bars

Pilot Officer C. F. Gray, DSO, DFC and two bars



Air-Vice Marshal Sir Keith
R. Park, GCB, KBE, MC
and bar, DFC, Croix de
Guerre

Air-Vice Marhsal Sir Keith R. Park, GCB, KBE, MC and bar, DFC, Croix de Guerre



A Hudson of Coastal Command on a reconnaissance of the
Norwegian coast

A Hudson of Coastal Command on a reconnaissance of the Norwegian coast

A Sunderland of Coastal Command on patrol over a convoy of troopships approaching Britain



A Sunderland of Coastal Command on patrol over a convoy of troopships approaching Britain

A Coastal Command Blenheim above an enemy tanker attacked in the North Sea



A Coastal Command Blenheim above an enemy tanker attacked in the North Sea

Part of the dock area at Dunkirk where the German invasion fleet was concentrated. Dock buildings round the upper of the two docks shown have been completely destroyed and unloading cranes smashed. Damaged barges can be seen near the entrance of the upper dock where a number of others have been sunk.



Part of the dock area at [Dunkirk](#) where the German invasion fleet was concentrated. Dock buildings round the upper of the two docks shown have been completely destroyed and unloading cranes smashed. Damaged barges can be seen near the entrance of the upper dock where a number of others have been sunk



A section of London east of St. Paul's Cathedral after the raid of 29 December 1940

A section of [London](#) east of St. Paul's Cathedral after the raid of 29 December 1940



The centre of Coventry after the attack of 14 November 1940



The German caption reads 'Returning with over 700 hits .. an operational flight. The fabric even stood up to a belly landing.' The inset is described as 'Heinkel III shooting down a Spitfire'

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A Defiant about to take off on a night interception patrol

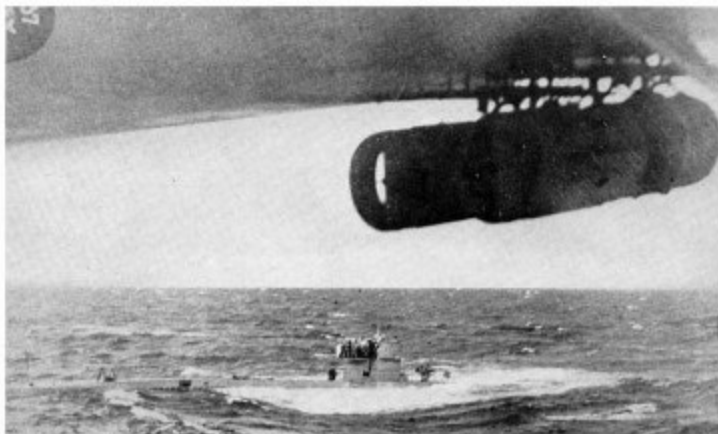


A Defiant about to take off on a night interception patrol



A German supply ship on fire in a fiord in south-west Norway
after a dawn attack by a Coastal Command Beaufort

A German supply ship on fire in a fiord in south-west Norway after a dawn attack by a Coastal Command Beaufort



U-boat (U. 570) which surrendered south of Iceland to a Coastal Command Hudson. This photograph was taken from the Catalina flying boat which relieved the Hudson. Depth charge is in profile

U-boat (U. 570) which surrendered south of Iceland to a Coastal Command Hudson. This photograph was taken from the Catalina flying boat which relieved the Hudson. Depth charge is in profile



Aircraft at the edge of an airfield in Iceland protected from the high winds by mounds of earth and stones

Aircraft at the edge of an airfield in Iceland protected from the high winds by mounds of earth and stones



Blenheims of Bomber Command attack shipping and the docks
at Rotterdam on 16 July 1941

**Blenheims of Bomber Command attack shipping and the docks at [Rotterdam](#) on 16 July
1941**



Attack on power stations at Cologne on 12 August 1941

Attack on power stations at [Cologne](#) on 12 August 1941



BOMBER COMMAND OPERATIONS, September 1939—December 1941

¹ Flying Officer S. M. McK. Watson; born **Wellington**, 25 Jan 1913; joined RAF Oct 1939; killed on air operations, 20 Jul 1940.

by the New Zealand Squadron against targets in **Germany** for the loss of six aircraft; three of these crashed on their return to England, two whilst attempting forced landings, and a third after the crew had baled out when they ran short of fuel and were unable to find a landing ground. The highest price had to be paid for experience in this new form of long-range warfare, and as the months passed the casualty list mounted steadily. But the spirit of the squadron remained high. Aircrews became attached to their own particular aircraft, several of which were adorned with designs of various kinds—Flight Lieutenant Lucas,¹ for example, had a large painting on his Wellington of the cartoon character ‘Popeye the Sailor’, and ‘Popeye’ became his own nickname. But it was not long before many of the aircraft also bore markings of a different kind on their outer fabric—numbers of patches covering the scars of bullets and shrapnel, grim reminders of encounters with enemy night fighters and anti-aircraft fire.

New Zealand airmen also flew with many other squadrons of Bomber Command in the early raids on German targets, and a number served

with distinction as captains of Wellingtons, Whitleys, Hampdens or Blenheims. Flight Lieutenant McKay,² who had been flying with a Whitley squadron since the outbreak of war, had completed 37 sorties over enemy territory by the end of 1940. Flying Officer Menzies³ flew as captain of a **Blenheim** bomber both during the Battle of **France** and in subsequent raids against targets in **France**. Flying Officer Nixon⁴ completed 30 missions over **Germany** before being taken prisoner following an attack on the Zeiss works at Jena on 16 August. Flying Officers Paape⁵ and Svendsen⁶ captained Hampden bombers on both bombing and minelaying sorties. One night in June, while making a low-level attack on a special target, Svendsen's aircraft was hit by anti-aircraft fire and the navigator seriously wounded. Although still opposed by enemy fire, he attacked his target and navigated the Hampden back to base. By the end of July Pilot Officer Swift,⁷

¹ Wing Commander F. J. Lucas, DFC and bar; Queenstown; born Dunedin, 18 Aug 1915; joined **RAF** 1936; transferred **RNZAF** Jul 1939; OC No. 1 (GR) Sqdn, 1942–43; served No. 487 Sqdn and HQ Transport Command, 1943–45.

² Group Captain J. J. McKay, DSO, DFC, DFC (US); **RAF**; born **Nelson**, 2 Jun 1916; joined **RAF** 1937; SASO, Air HQ, **Levant**, 1944; commanded No. 240 Wing, MAAF, 1944–45.

³ Flight Lieutenant G. J. Menzies, DFC; born **Christchurch**, 5 Nov 1920; joined **RAF** Oct 1938; killed on air operations, 22 Jan 1941.

⁴ Squadron Leader W. M. Nixon, DFC; **RAF**; born **Auckland**, 6 May 1913; joined **RAF** 1937; p.w. 17 Aug 1940.

⁵ Squadron Leader A. M. Paape, DFC and bar; born Dunedin, 13 Apr 1919; joined **RAF** May 1939; killed on air operations, 3 Apr 1943.

⁶ Flight Lieutenant N. H. Svendsen, DFC; **Auckland**; born **Pukekohe**, 27 Jan 1915; joined **RAF** 1937; p.w. 30 Jun 1941.

⁷ Flying Officer J. F. Swift, DFC; born **Invercargill**, 19 Jun 1917; joined RAF Jun 1938; killed on air operations, 30 Sep 1941.

captain of a Wellington bomber, had completed 30 sorties over enemy territory, while Pilot Officer Parsons ¹ flew continuously with a Whitley squadron until he was lost on 14 August in a raid against the Fiat works at Turin. Parsons had bombed the target but, as the result of an attack by an Italian fighter, had to make the return flight on one engine. When only one mile from the English coast, the Whitley went down into the sea and only three members of the crew survived. Sergeant Reece ² completed many sorties as a navigator with a light bomber squadron. On one occasion, although wounded in an engagement with enemy fighters, he remained at his post and guided his pilot safely back to base through severe weather.

On 20 July 1940, when a gallant attempt was made to damage the German battleship *Tirpitz* which was nearing completion at **Wilhelmshaven**, Pilot Officer Gould ³ captained one of the six Hampdens detailed to bomb at low level. Only three of the aircraft found and attacked the battleship. Flying in almost at mast height, they met a heavy barrage of anti-aircraft fire and all three were shot down. Gould escaped serious injury and was captured. He afterwards told how:

The first hits we received came from destroyers anchored in the harbour when we were about half a mile from the shore. From then on the Hampden was hit continually all the way to the target—both engines, parts of the wings and fuselage were on fire before we passed over the first wharves. My navigator released our bombs as we approached the battleship. Flames lit up buildings and assisted me to clear masts and gantries. As soon as level ground appeared I pulled everything back to come down on what appeared to be a beach. It turned out to be mud flats

exposed by the low tide. Our rear gunner was killed and the navigator thrown through the nose of the aircraft. We three survivors were challenged a few minutes later and captured.

Pilot Officer Kirk,⁴ navigator in another Hampden bomber, was fortunate to survive when his aircraft was shot down one night early in September while returning from an attack on [Mannheim](#).

It was about midnight and we were flying at about 11,000 feet between Leige and Maastricht when the aircraft was suddenly caught in the beams of many searchlights. Before our pilot could dive clear we were attacked by a Messerschmitt night fighter. The first bursts put our gunners out of action, both mortally wounded; a second attack smashed the controls and set

¹ Pilot Officer E. I. Parsons, DFC; born Linwood, [Christchurch](#), 24 Oct 1912; joined [RAF](#) Apr 1940; killed on air operations, 14 Aug 1940.

² Squadron Leader R. A. Reece, DFC, DFM; [RAF](#); born [Christchurch](#), 2 Nov 1914; joined [RAF](#) Aug 1938.

³ Flight Lieutenant A. H. Gould, DFC; [NSW](#), [Australia](#); born [Wanganui](#), 26 Sep 1918; joined [RAF](#) Mar 1938; p.w. 20 Jul 1940.

⁴ Flight Lieutenant I. C. Kirk; born Parnell, [Auckland](#), 16 Nov 1914; joined [RAF](#) Jul 1939; p.w. 2 Sep 1940.

the port engine and fuel tanks on fire. I was wounded in the head and momentarily dazed. On coming to I tried the intercom. but got no reply. Attempted to crawl up to help the pilot, thinking he was wounded or dead. Found this impossible even though I used all my strength against what seemed like a mass of twisted metal and broken wires. The Hampden was now lurching wildly, so groping my way to the escape hatch I dived out. The air seemed buoyant and as I slowed down I saw

the Hampden crash and burst into flames. Unknown to me the captain had been thrown out. He had no recollection of pulling his ripcord, only of landing in a ploughed field with his chute opened enough to break his fall. My own had opened cleanly and I landed in a tree. Scrambling down I threw my gear under a bridge and, failing to find any sign of the others, optimistically set off westward, steering by the stars. Just before dawn a Dutch farmer caught up with me as I limped along. He took me to his home but just as I was about to wash the blood from my head, a German patrol surprised us and took me prisoner.

An unusual experience befell Flight Lieutenant Barker ¹ of No. 83 Squadron, when he was returning from an attack on the Dortmund-Ems canal one night in August. Suddenly the port engine was hit and shortly afterwards, while the Hampden was flying over the Dutch coast, the damaged propeller fell off; the bomber fell some 2000 feet before Barker could regain control. Then, about ten miles from the English coast, the other engine began to falter, but by coaxing it along he was able to make a landing in the sea a few yards from the shore. The crew escaped without serious injury. Sometimes, however, the incidents which occurred in flight were of a less serious nature. On one occasion a New Zealand captain was flying his bomber back over the North Sea when there was a sudden and unexpected crash on the nose of the aircraft. His startled crew turned to see the face and head of their captain covered with blood. It streamed down the back of his helmet and he appeared to have been seriously wounded. But all that had happened was that a seagull had hit the front perspex and crashed through it into the pilot's face, and he escaped with no more than a black eye. Many of the sorties by the bomber crews during this period were, in fact, uneventful, often because, as Air Vice-Marshal Coningham wrote at the time, 'excellent and courageous work was so well done that incidents did not occur.'

*** * * * ***

From the end of August until the middle of October 1940, the effort of the bomber squadrons was directed almost entirely against the enemy's preparations for the invasion of **Britain, and New Zealanders**

flying with these units found that targets now detailed

¹ Flight Lieutenant D. W. F. Barker, DFC; born **Gisborne**, 27 Feb 1914; joined **RAF** Nov 1939; died of injuries received on air operations, 12 Feb 1941.

for attack were the growing concentrations of barges and small ships in the North Sea and Channel ports. The docks and installations in these ports were also bombed. Although increasingly well defended, these were comparatively easy targets to locate and considerable damage was done to the enemy's flotillas and to the ports in which they were assembling. German records reveal that, of the vessels assembled for the invasion of **Britain**, 21 transports, 214 barges and five tugs had been sunk or damaged by 21 September 1940. The bomber aircraft also co-operated with the **Royal Navy**, as on the night of 10 September, when two Wellingtons from No. 75 Squadron dropped flares over Ostend harbour to assist warships making a short bombardment. Altogether 45 sorties were flown by the squadron during these weeks against what came to be known as the 'invasion ports'.

New Zealand airmen with the **Blenheim** and Hudson squadrons of **Coastal Command** also took part in these raids and in the attacks on what were described as 'fringe targets'. They also flew reconnaissance patrols along the enemy-held coastline from **Norway** to the **English Channel** as far west as **Brest**. This watch on the ports from which invasion fleets might be expected to sail was of the greatest importance if early warning of the enemy's intentions was to be received. The patrols were given vigorous code-names. One was called 'Bulldog'—a name that expressed the British determination at this time to hold out at all costs. Another was named 'Armada', with all its historic associations of the overthrow of a vast invading force. But the reconnaissance had to be carried out in the face of stiff enemy opposition, and many aircraft failed to return or came back badly battered after encounters with enemy fighters. On one occasion Pilot

Officer Kean, ¹ flying a Hudson of No. 206 Squadron on a dawn patrol off the Dutch coast, was attacked by three Messerschmitts. His rear gunner scored hits on the enemy leader but was almost immediately killed by fire from one of the other machines. The Hudson only escaped destruction through Kean's prompt action in diving to sea level and making violent turns and manoeuvres. Although wounded, he did this with such skill that the enemy finally ran out of ammunition and withdrew. It was while engaged on a similar reconnaissance patrol early in October that Pilot Officer Fowler, ² of No. 248 **Blenheim** Squadron, fought a spirited and gallant action against a Dornier 215, an enemy machine of superior speed and fire power. During the engagement Fowler was wounded in the face and hands but he

¹ Pilot Officer R. T. Kean, DFC; born **Green Island**, 5 Apr 1918; joined RAF Aug 1938; killed in flying accident, 5 Aug 1940.

² Flying Officer A. L. Fowler, DFC; born **Foxton**, 21 Jun 1918; joined RAF May 1939; killed in flying accident, 23 Aug 1941.

continued to press his attacks until the Dornier broke off the combat. Subsequent wireless messages from the German aircraft indicated that it was retiring to base badly damaged and with members of its crew killed and injured.

In northern waters reconnaissance patrols were flown along the Norwegian coast as far as Trondheim. It was in this port that the *Scharnhorst* was discovered towards the middle of June 1940. Bombing attacks failed to cause any damage to the battle-cruiser but forced her to put to sea. Here on 21 June she was attacked by Beauforts of **Coastal Command** with greater success, three direct hits being reported. The *Scharnhorst* then returned to **Kiel**. Flying Officer Trigance, ¹ who had been with No. 42 Squadron from the early days of the war, captained one of the nine Beauforts which made the attack. His first bomb was seen to

strike a gun turret and send up a shower of debris. A second fell in the water close alongside the warship. The weather was clear when the Beauforts attacked and they were greeted by a heavy barrage. Enemy fighters also appeared and three of the British aircraft were shot down, but Trigance was among those who returned safely. However, this attack was only one of the results of the reconnaissance which continued throughout the summer and autumn over the North Sea and the coastal waters of **Norway**. Day by day reports were brought back—reports often gathered in the face of enemy fighters and anti-aircraft opposition and in spite of adverse flying conditions.

Although nominally reconnaissance, these patrols assumed a more offensive character as the enemy began to turn the resources of **Norway** to his own use. Bombing raids were made on such targets as oil storage tanks, oil factories, airfields and on enemy merchant shipping along the coast.² A typical patrol was flown on 19 June by Flying Officer Tacon as captain of a Hudson of No. 233 Squadron. Detailed to reconnoitre Kristiansand, he took off from **Leuchars airfield** in **Scotland** shortly before dawn, and after two hours' flying across the North Sea a landfall was made on the Norwegian coast. At first the crew were unable to locate their objective through the cloud and rain, but eventually the harbour was found and a temporary break in the sky enabled photographs

¹ Wing Commander K. W. Trigance, DFC; **RNZAF**; **Fiji**; born **Temuka**, 4 Aug 1914; joined **RAF** 1937; transferred **RNZAF** Jan 1944; Senior Administrative Officer, **Wigram**, 1945.

² The attacks on merchant ships represented an interesting change of policy. Previously aircraft had been ordered to observe scrupulously the conditions of the Hague Convention, but in July 1940, as a reprisal for the enemy's disregard of maritime law in his attacks on East Coast lightships and shipping, the **War Cabinet** had reluctantly authorised aircraft to attack at sight enemy merchant vessels in certain specified areas of the North Sea and the Norwegian coast. This marked the beginning

of a long campaign against the enemy's sea communications which was later waged along the whole coast of **Europe** and in the **Mediterranean**.

to be taken. Tacon then flew over the town to release a stick of bombs on the neighbouring airfield. Ships seen in other fiords were then photographed before the Hudson began the return flight. Flying Officer McHardy, ¹ who had joined No. 248 Squadron shortly after the outbreak of war, was also prominent in these duties. Early in September he completed a notable reconnaissance of the long and difficult Sogne Fiord in which enemy ships were reported to be sheltering; an earlier attempt had failed owing to bad weather. McHardy afterwards reported:

On reaching the entrance to the fiord we found the cloud down to the deck and could not get in, so climbed to 10,000 and went over the top. A mattress of cloud extended to the East but we flew on and after some twenty miles suddenly saw a little hole and water so I went down through it and we found ourselves in the fiord. We flew right up observing a 3000 ton ship just leaving a port on the way. The fiord got narrower and finally we reached the end near the Swedish border. I had to do a semi-stalled turn to get round under the cloud. On the way back the ship was in mid stream and we made a machine gun and bombing attack at mast height obtaining hits on the stern. We then proceeded down the fiord but soon found ourselves trapped with no hole to go back up through again. Fortunately the fiord at this spot was straight for a reasonable distance so I set my directional Gyro in a trial run, turned 180° and with full power climbed dead straight through 6000 feet of cloud earnestly hoping I would not drift into one side or the other as the mountains were 6000–7000 feet high and very close. Eventually we got clear and reached base without further incident.

Trigance had a narrow escape the same month while making a reconnaissance of Aspo Fiord. He had just sighted and bombed a ship in the fiord when three fighters dived upon his machine. By skilful manoeuvring he evaded their first attack, and his rear gunner reported

hits on one of them before the Beaufort reached cloud cover. Other crews were less fortunate, and frequently single aircraft engaged on these reconnaissance patrols disappeared without their fate being known.

As the Germans armed their merchant ships, the Hudsons and Blenheims met increasingly heavy fire in making their low-level attacks, and aircraft sometimes limped back with members of the crew wounded or dying. On several such occasions outstanding acts of gallantry were performed. One grey November day in 1940 three Blenheims of No. 235 Squadron bombed two ships off the enemy coast. The captain of one of these aircraft, Pilot Officer Davison, ² was wounded in the foot and thigh during the attack and

¹ Wing Commander E. H. McHardy, DSO, DFC and bar, Croix de Guerre (Fr); **RAF**; born Palmerston, 24 Jun 1920; joined **RAF** May 1939; commanded No. 404 Sqdn, 1942; No. 143 Sqdn, 1943–44.

² Wing Commander J. T. Davison, OBE, GM; **RNZAF**; England; born **Ashburton**, 7 Jan 1914; commercial traveller; joined **RNZAF** Oct 1939; commanded Initial Training Wing, Delta, 1944.

the rear gunner had part of his arm blown off. Although suffering considerable pain, Davison flew his machine back across the North Sea, only to discover on reaching base that the hydraulic gear had been put out of action. He tried hard to get the undercarriage down but was unsuccessful and was forced to make a crash landing. Unknown to him one of the bombs had failed to release during the attack and this fell and exploded on landing, setting the aircraft on fire and trapping the wounded gunner in the wreckage. Davison and his navigator scrambled clear but then discovered that the gunner was still in the burning aircraft. They immediately returned and, regardless of the flames and the fact that the petrol tanks might explode at any moment, succeeded

in dragging the wounded man to safety. Both men were badly burned.

As the year drew to a close the aircrews flying these missions over northern waters had to face the onset of winter as well as the menace of enemy fighters. One Hudson pilot writes:

Our patrols usually began before dawn which meant that crews were roused in the early hours to face a bleak aerodrome in pitch darkness. There was always a bitter wind blowing and perhaps ice on the ground. After briefing, pilots, navigators, gunners and wireless operators would stagger and slither to the aircraft each laden like Father Christmas with their bulky bags, parachutes, flying kit, packets of sandwiches, thermos flasks, pigeon baskets and so on. Flying towards the rising sun it might be that the navigator had just enough light to see the white caps on the grey sea as he lay full length in the nose of the aircraft calculating wind, drift, speed and position. The engines would drone on for a couple of hours before the coast of **Norway came into view, although more often than not it would be hidden in cloud or mist. If possible, we flew into the fiords to take photographs, spot shipping and note activity at enemy held aerodromes, but as such objectives were often barely within range of our base, the time spent in the target area was very limited. A further source of frustration was that clear skies with conditions of perfect visibility alternated rapidly with very bad weather.**

But these patrols and the bombing attacks were only part of the work of **Coastal Command at this time. Other squadrons with which New Zealand airmen were flying continued the vital task of escorting convoys carrying food and supplies to **Britain**. In the Western Approaches, where the depredations of the German submarines were now becoming serious, the **Royal Navy** found these air escorts of great assistance, limited though they were in range and number; indeed U-boats seldom ventured to approach ships while an aircraft was patrolling in the vicinity. The Hudsons and Sunderlands were also able to locate small boatloads of survivors from torpedoed vessels and guide warships or merchantmen to the scene to pick them up. In addition to this escort and rescue work, anti-submarine patrols were flown to cover the movements of naval**

forces in home waters. Occasionally a damaged warship was helped as when the destroyer *Kelly*, badly mauled in the Battle of Narvik, was found limping back across the North Sea by a Sunderland of No. 210 Squadron and escorted to a Scottish port. The flying boat was captained by Flight Lieutenant Frame,¹ who had joined this unit three months before the outbreak of war. Also prominent during this period as captains of Sunderlands were Flight Lieutenant Stead, who flew with No. 204 Squadron from the Shetlands and later from *Iceland*, Flying Officer Rea,² who had joined No. 201 Squadron in October 1939, and Flying Officers Baggott,³ Evison⁴ and Gibson,⁵ who were with No. 210 Squadron at Oban. Altogether just over 100 New Zealand airmen flew with *Coastal Command* as pilots, navigators, wireless operators, and gunners during the first year of war. Thirty lost their lives. For the most part their duties had been unspectacular, involving long hours of flying over the sea, seldom relieved by any incident; yet they demanded qualities of quiet courage and endurance which deserve recognition along with the exploits of those who flew on more eventful operations.

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During this first year of war a small but important contribution in the reconnaissance field was made by the pilots of the photographic aircraft. In unarmed machines, these men flew over enemy territory photographing German naval bases, ports, airfields and cities. Before and during the campaign in *Belgium* and *France* they brought back useful information on the disposition of the enemy's ground and air forces, then later, when the invasion threat increased, photographs were taken of the German preparations by land and sea. The results of the *RAF* bombing attacks on the invasion targets were also noted. Four New Zealanders, Flight Lieutenant

¹ Wing Commander A. Frame, DFC; born *Oamaru*, 6 Sep 1916; joined RAF Mar 1938; transferred *RNZAF* Jan 1944; commanded No. 204 Sqn, *West Africa*, 1944–45.

² Flight Lieutenant W. S. Rea, DFC; born Paengaroa, 7 Oct 1915; joined RAF Mar 1939; killed in flying accident, 5 Dec 1941.

³ Wing Commander S. G. Baggott, DFC; **RAF**; born **London**, 25 Nov 1916; joined **RAF** Jun 1938; commanded No. 95 Sqdn, **West Africa**, 1945.

⁴ Wing Commander C. E. W. Evison; England; born **Invercargill**, 27 Mar 1916; joined **RAF** Jan 1938; commanded No. 204 Sqdn, **West Africa**, 1943; seconded BOAC, 1944–45.

⁵ Wing Commander T. P. Gibson, DFC; **RAF**; born **Christchurch**, 25 Oct 1913; joined **RAF** May 1938; commanded New Camp Air Base, Gibraltar, 1944–45.

Clark, ¹ Flying Officers Millen ² and Milne ³ and Pilot Officer Parker, ⁴ were among the small group of airmen who pioneered the work of the special photographic reconnaissance unit in 1940. This unit, which was later to play a vital role in providing information for all three services in the various theatres of war, was not formed until after the outbreak of hostilities since it had been originally intended that photographic sorties should be flown by **Blenheim** bombers. But it was soon found that these aircraft were no match for the German fighters and they were often unable to penetrate to their objectives. During the early months losses were heavy and photographs few. Meanwhile a civilian air survey operator, Mr. **F. S. Cotton**, had suggested the fitting of a Spitfire, the fast fighter then being introduced into the service, with cameras instead of guns and relying on its high speed and ability to fly at great heights for protection against enemy fighters. A special unit was formed in October 1939 to develop Cotton's idea, and it soon proved highly successful in operation. Clark joined the unit early in the following month as the third operational pilot to be enlisted for this special task. He was already an experienced pilot—he had made a solo flight from England to New Zealand three years before the war. Milne arrived a few

weeks later on transfer from a **Blenheim** squadron in **France**, with which he had been flying on photographic duties from the outset. Of his early experiences with the new unit he writes:

We were at Heston, the English base—six pilots, an Australian, a Canadian, two Englishmen and two New Zealanders—typical of many R.A.F. outfits. Early in January Clark, two other pilots and myself went to **France** to work over **Germany** while the others remained behind to cover the German ports. They had a Hudson at Heston and used it over **Kiel** until it was shot down in error by our own fighters over England. In **France** with our solitary Spitfire we covered a fair area of the German defences in the West, flying at altitudes of 30–35,000 feet in very low temperatures. At first we operated off snow at an airfield south of Lille. Enemy fighters gave us no trouble during the first month but our own anti-aircraft fire and French based Hurricanes caused us a few shocks. With long range tanks in the Spitfire giving up to 4 ½ hours' endurance and operating at high altitudes we were set some problems in D.R. navigation, in conserving fuel supplies and in keeping warm. Flying for photography in sloppy air was also difficult but the worst enemy was our condensation trails.

¹ Squadron Leader L. E. Clark, DFC; **Christchurch**; born **Christchurch**, 16 Aug 1906; joined **RAF** Nov 1939; transferred **RNZAF** Jan 1944.

² Flight Lieutenant S. J. Millen, DFC; born **Wanganui**, 20 Jan 1914; joined **RAF** Jun 1938; killed on air operations, 16 Dec 1940.

³ Flight Lieutenant C. D. Milne, DFC; **RAF**; born **Petone**, 2 Jul 1916; Cranwell Cadet; permanent commission **RAF** 1936; p.w. 24 Apr 1940.

⁴ Flight Lieutenant W. B. Parker; **Blenheim**; born **Blenheim**, 16 Nov 1914; clerk joined **RNZAF** Sep 1939; transferred **RAF** Apr

1940; retransferred RNZAF Apr 1945.

It was, in fact, the white trail left by his Spitfire which led to Milne being shot down towards the end of April 1940. By that time the Germans were maintaining high-altitude patrols in order to intercept the photographic aircraft.

Six Messerschmitts approached under my 'con-trail' but I did not see them as I was busy photographing. The leader put a cannon shell into my engine which rapidly failed. While it lasted I tried to get back to **France**, suffering further attack on the way. Fifty miles from the frontier at a few thousand feet the engine gave out so I baled out between attacks after putting the Spitfire into a dive to destroy its equipment. Landed in a village and was immediately arrested.

Meanwhile the unit in **France** had been reinforced with a second Spitfire, and the two aircraft operated from different bases. Clark opened the second base at Nancy early in March 1940, and flew many sorties from there during the following months before the final evacuation from **France**. He was then given command of the flight inaugurated at St. Eval, in **Cornwall**, to cover **Brest** and the French ports; later in the year he returned to Heston to cover objectives in **Germany**.

Millen and Parker joined the flight at Heston in July 1940, and during the following months both men flew Spitfires on many sorties over enemy territory and the Channel ports, photographing the German preparations for the invasion of **Britain**. It was during a routine flight from Cap Gris Nez to the Scheldt early in September that Parker discovered one of the first concentrations of boats and barges in which the Germans intended to transport their invading forces across the Channel. The following month, when a new type of long-range Spitfire was introduced, Millen made the first operational flight in which the new aircraft was used and brought back an excellent collection of photographs. Details of his flight are thus recorded:

On the 29th October 1940, Flying Officer Millen left Heston in a new

type long-range Spitfire, to carry out a high altitude photographic reconnaissance of **Berlin**. He found it covered with cloud so decided therefore to look for other targets. He succeeded in photographing Stettin, Swine- munde, **Rostock** and Warnemunde, and returned to Heston after a flight of five hours fifty-five minutes at 27,000 feet. This is the first operation on which this type of aircraft has been used, and Flying Officer Millen deserves great credit for his initiative in carrying on further into enemy territory, photographing what he knew were important targets, when he found **Berlin** covered with cloud. He has completed over thirty photographic operations in this Unit, all over enemy territory, in unarmed single-seater aircraft at high altitudes.

Unfortunately, two months later Millen failed to return from a low-level reconnaissance of the French ports.

Parker had an amazing escape after an encounter with German fighters early in October. While climbing over **Kent**, preparatory to setting off on a photographic mission, he was suddenly attacked by two Messerschmitts. They came down out of the sun; his Spitfire went up in flames and he had to jump. The parachute opened normally but Parker lost consciousness owing to lack of oxygen at that height. When he came round a bit lower down he found that his clothing was smouldering in several places. He had been sprayed with petrol from the tanks of his Spitfire during the attack and this had ignited before he jumped. Despite frantic efforts to put out the fire, it became worse as it was fanned by the descent and soon the airman was a flaming torch. The pain became so intense that Parker decided to release his parachute and put an end to his agony. But the quick release failed to operate and only the shoulder straps came away. Parker pitched forward and hung head downwards, gripped only by the straps around his thighs which now slipped down and held him by the ankles. The flames then travelled upwards to his leather flying boots and died away, but not before one strap had broken, leaving him hanging by one leg. Holes burnt in the parachute caused him to land heavily and break an arm. Fortunately his descent, marked by a trail of smoke, had been witnessed by a nearby army unit whose

medical orderlies were quickly on the scene to rush the injured airman to hospital. Parker made a good recovery and eventually, at his own request, was posted back for flying duties with a photographic reconnaissance squadron with which he completed a further tour of operations.

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In November 1940, although the immediate threat of invasion had been lifted from the **British Isles**, the prospects for British arms were bleak in the extreme. The Army, after the loss of its equipment at **Dunkirk**, was still suffering from a serious lack of weapons, and a long period of replacement, expansion, and training was necessary before it could undertake operations against the enemy in **Europe**. In the air **Britain's** strength had been weakened by six months of intensive operations and Fighter Command, in particular, was exhausted as a result of its efforts over England during the summer. 'The situation was extremely critical,' writes Air Chief Marshal Dowding in his despatch on the Battle of **Britain**. 'The majority of the fighter squadrons had been reduced to the status of training units.' The bomber force was still too weak, with both weapons and techniques insufficiently developed, for it to strike effectively at the enemy, while **Coastal Command** for the same reasons was not yet able to give very substantial aid in the war at sea, where the resources of the **Royal Navy** were now strained to the limit in endeavouring to meet its world-wide commitments.

Defeated in their plans to reduce **Britain** by invasion, the Germans had now commenced an assault by sea and air upon her supply routes so that, in addition to heavy raids by night on her cities and ports, **Britain** now faced a blockade more serious than she had endured in the First World War. U-boats were being built at a rate far exceeding their losses, units of the **Luftwaffe** were organised to co-operate with them, and powerful new warships such as the *Bismarck* were approaching completion and would soon be available to reinforce the onslaught on British merchant shipping. Greater facilities for conducting the blockade were now open to the Germans through their possession of ports and air

bases in both **France** and **Norway**.

Outside Europe there was little in the strategic situation to relieve the gloom. In the **Middle East** the collapse of **France** and the entry of **Italy** into the war at the side of **Germany** had thrown the British on to the defensive. **Malta** was besieged and an unequal battle was being sustained in the air above the island. Egypt was isolated and invaded by large Italian forces under Marshal Graziani, before which General Wavell¹ had retreated half-way to **Alexandria**. A further threat to Egypt lay in the considerable Italian force in East **Africa** which had already overrun **British Somaliland**. In addition, the vital **Mediterranean** sea route was doubly threatened. Gibraltar was now open to German attack through **Spain**, and plans for this operation were actually being prepared in **Berlin**. At the same time, hostile aircraft dominated the narrow channel between **Sicily** and **Africa**, while there also existed a powerful and, in most respects, modern Italian fleet provided with good bases. The Admiralty had declared themselves unable to pass even military convoys through the **Mediterranean** because of these dangers, and reinforcements for Egypt had to proceed by way of the Cape. Against the enemy's superior strength and strategic advantages in the Mediter- ranean, the British could muster, apart from the small garrison at Gibraltar, only the few divisions of **Middle East Command**, a handful of air squadrons flying obsolete machines, and the two small fleets based at its eastern and western extremities.

In the **Far East**, where **Japan** seemed bent on pursuing her aggression, there was a further threat to British interests brought nearer by the signing of a pact, in October 1940, between **Germany**, **Italy** and **Japan**. After her defeat **France** was unable to protect Indo- **China** and it appeared only a matter of time before

¹ Field Marshal Earl Wavell, PC, GCB, GCSI, GCIE, CMG, MC, Legion of Honour (Fr), Legion of Merit (US); born 5 May 1883; GOC-in-C **Middle East**, 1939–41; C-in-C, **India** 1941–43; Supreme Commander, SW Pacific, 1942; Viceroy and Governor-General of

India, 1943–47; died 24 May 1950.

that region would be occupied by the Japanese, bringing them within striking distance of ill-protected British territories in South-East Asia.

Some relief from this precarious strategic situation was, however, soon to come to the British people. Early in December 1940 the Germans, after failing to secure the co-operation of **Spain**, abandoned their plans for the attack on Gibraltar. About the same time Wavell's forces in the **Middle East** began a series of brilliant offensives by land, sea and air which broke the Italian threat to Egypt, although owing to speedy German intervention in the **Mediterranean** and the demands on British forces to aid **Greece**, this success was to prove only temporary. More permanent relief to British arms and to the **British Isles** in particular was to come from **Hitler's** decision, on 18 December 1940, to prepare for an attack on **Russia** 'even before the end of the war against England.' Although at the same time **Hitler** ordered that invasion preparations against England were to be maintained and efforts made 'to concentrate on every means of waging war by sea and air on **Britain's** supplies from overseas', the Germans found that they were unable to maintain a heavy scale of air attack against **Britain**. Indeed, the **Luftwaffe** soon became so heavily involved in **Russia** and in the **Mediterranean** that the night raids against **Britain** ceased almost entirely for long periods; the air attacks on shipping in the Western Approaches also dwindled as the resources of the **Luftwaffe** were drawn eastwards. Not until the advent of the V-weapons in 1944 did **Britain** have to face aerial attack of the same intensity as she endured during the winter of 1940.

With the failure of the bombing raids to break **Britain's** resistance, the denial of food and supplies seemed the only solution open to the Germans by which they could hope to force her surrender. But the opportunity was not exploited to the full while **Britain** was still weak. Before the end of 1941 most of the long-range Condor aircraft had been

withdrawn from their **Atlantic** patrols and sent to the **Mediterranean** or to the Russian front for use as transports. The German Navy, as **Admiral Raeder** complained bitterly, was thus deprived of air co-operation such as was given to the Royal Navy in growing strength by the British **Coastal Command**.

Such developments reflected divided views in the German High Command on the place of air power in the conduct of the war. The Luftwaffe, in an independent role, had already proved unequal to the task of eliminating **Britain's** air force, and this failure vindicated the German army leaders in their belief that the role of air power was essentially one of tactical support for the ground forces. It is not surprising, therefore, that early in 1941 the German **Air Force** was compelled to turn from the strategic attack on **Britain** to giving aid to the army in the **Mediterranean** and, later, in **Russia**. Moreover, as these campaigns were started in the confident expectation that they would be of short duration, little effort was made to strengthen the **Luftwaffe**. No insistent demand was made for new and improved types of aircraft, nor was there any immediate programme for increased production or aircrew training. The Germans also made little attempt to build up equivalents to the British Bomber and Coastal Commands with their scientific and technical experts making a careful study of the special problems of strategic bombing and the war at sea. But the Germans were not planning a long war. **Hitler's** strategy still contemplated a series of separate thrusts and quick victories over enemies that were less prepared than **Germany**. The failure to renew the Battle of **Britain** and then the underestimation of **Russia's** strength were the major miscalculations in this strategy.

The change in the direction of German operations in **Europe** during 1941 was to have important effects on the air operations of both sides. The redeployment of the **Luftwaffe** to face eastwards was commenced at the beginning of the year with the transfer of units to the **Mediterranean**. By the end of January over 300 aircraft had been moved to **Italy** and **Sicily** to begin the reduction of **Malta**. Soon afterwards, with

the failure of the Italian Air Force, the **Luftwaffe** was called upon to take an active part in **Western Desert** campaigns. Then in April it began extensive operations in support of the ground forces against **Yugoslavia** and **Greece**, while the capture of **Crete** a month later was carried out almost entirely as a **Luftwaffe** operation. In June came the attack on **Russia**, for which the German Army was supported by no fewer than 2800 aircraft out of the total **Luftwaffe** first-line strength of 4300 machines. The subsequent drive towards **Moscow**, together with air operations in the **Mediterranean**, demanded the use of such a large proportion of the remaining German air strength that little was available for attacks against the **British Isles** and British shipping.

Thus Britain was able to recuperate, to increase war production without interruption, to devote more of her resources to the vital struggle against the U-boats and, finally, to begin an aerial offensive that was to carry the war to the heart of **Germany**. The Royal **Air Force** had seen in the German effort over **Britain** during 1940 the power of the air weapon, even if badly used, and felt that a strong offensive against vital objectives in **Germany** might have decisive results. In any case, it was evident that for some years to come the air was the only means by which **Britain** would be able to strike directly at **Germany**, a view forcefully expressed by the British Prime Minister towards the end of 1940:

The Navy can lose us the war, but only the **Air Force** can win it. Therefore our supreme effort must be to gain overwhelming mastery in the air. The Fighters are our salvation, but the Bombers alone provide the means of victory. We must therefore develop the power to carry an ever increasing volume of explosives to **Germany**, so as to pulverise the entire industrial and scientific structure on which the war effort and economic life of the enemy depends.

But for some time after the Battle of **Britain** the **Royal Air Force** was forced to devote a considerable proportion of its limited resources to defensive operations against the threat of the night raider and the air and sea attacks on shipping. In addition, there were heavy

responsibilities in the **Mediterranean** and the defensive needs of the **Far East**. There was also another reason why the **Royal Air Force** could not immediately begin a heavy air offensive. **Britain** had entered the war incompletely prepared and in a position of dangerous weakness relative to **Germany**, and the various plans adopted for the expansion of the air arm were still in the early stages of execution. Indeed, many of the large factories and plants laid down at or shortly before the outbreak of war were only now beginning to come into production. Unlike her enemies, **Britain** had planned for a long war, and it would not be until the third year that she would possess a really powerful striking force. In the meantime a high proportion of Bomber Command's resources in personnel and aircraft had necessarily to be devoted to training, inevitably at the expense of waging offensive operations on an intensive scale.

Thus, as far as the **Royal Air Force** was concerned, the year which followed the Battle of **Britain** was to be one of building up its strength and, simultaneously, a period of experiment in various forms of offensive air warfare. But it was not to be without its achievements. By the end of 1941 British air power had been largely responsible for driving the U-boats from the immediate vicinity of the British coasts and confining the principal surface raiders to port. Considerable progress had been made towards defeating the menace of the night raider. A more realistic outlook on the bomber force had been born as it became clear that the bomber crews faced insuperable difficulties as well as dangers, and that much that policy sought to achieve was beyond their powers. More help from the scientist was forthcoming, while the operational commands and the aircraft industry brought new types of aircraft, including the first heavy bombers, laboriously through their teething troubles. And, at the same time, while the busy factories of both the **United States** and **Britain** continued to feed this growing air power, the vast schemes for aircrew training in the Dominions gave promise of making the British Air Force superior in numbers, as it had already proved itself in quality, to that of **Germany**.

But these things only came about gradually, and the more favourable turn of events which brought powerful allies to the side of the British people could not be foreseen at the end of 1940. Uppermost in the minds of those who directed [Britain](#)'s war effort in those grim and dark days were the threat of the U-boat blockade and the menace of the night bomber.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 6 – DEFEATING THE NIGHT RAIDER

CHAPTER 6

Defeating the Night Raider

IN the air assault on the **British Isles** during the second half of 1940, there were distinct changes in the form of attack as the Germans sought new expedients to replace each successive failure. The various phases did not, however, follow each other in any clear-cut sequence. They tended to overlap, each one merging into the next. The early operations had sought to engage the British fighter force in battle over the Channel and the south coast; next the struggle was continued over the southern counties with the **Luftwaffe** making a determined effort to destroy the defence organisation; then the attack moved nearer and over **London** until it became the main target. The failure of daylight attacks on the capital caused the Germans to resort to night bombing—an improvisation for which their air force was ill-prepared. Then, when **London** civilian morale did not collapse, the night raids turned upon the industrial centres and finally the ports, particularly those of the Mersey and the Clyde, the sole remaining **Atlantic** lifeline through which **Britain** now breathed. These various stages of the night assault—familiarily known in **Britain** as the ‘Blitz’—began early in September 1940 and continued through the winter to end abruptly in May 1941, when the Germans moved most of their bomber force to the East in preparation for the attack on **Russia**.

The Germans were forced to throw their heaviest effort into night bombing owing to the serious losses and damage which they suffered in the daylight battles. By September, serviceability in their bomber force was falling at such an alarming rate that night operations, with their comparative immunity from fighter attack, were the only alternative. Even so, the German bomber force never fully recovered. The reduction of wastage in battle was soon offset by heavy losses caused by bad landings on airfields in **Belgium** and **France**—as yet undeveloped for night flying or for use in bad weather. A further source of frustration to the Germans was the discovery that the bombing beam on which they had founded their hopes was being seriously upset by British counter

¹ Radio beacons and directional beam systems had been devised by the Germans as aids to daylight bombing in cloudy weather. They now began to use them as a compensation for the lack of training in night navigation and bomb aiming that existed in their bomber force through the loss of so many experienced crews in the daylight battle. However, the very reliance of the German bomber crews upon these aids made them vulnerable to radio counter measures. During 1940 the **Royal Air Force** built up an extensive organisation which developed a most effective technique for interfering so subtly with the German beams that, for a time, the enemy aircrews were unaware that their own aids were leading them astray.

Pending the introduction of other types of beam the **Luftwaffe** adopted the temporary expedient of relying upon periods of bright moonlight for large-scale raiding. Subsequent experiments with new beams and a pathfinder fire-raising force did not meet with the success that the Germans anticipated and, as the British defences improved, a heavier toll was taken of the raiders. The 'erasing' of British cities, which **Hitler** had threatened, proved more difficult than he had imagined.

Nevertheless, judged by the standards of 1940, the scale of attack was at first both heavy and sustained. By the end of October **London** had been bombed on almost every night for eight weeks. One particularly heavy attack came with the full moon on the 15th of that month when nearly 500 German aircraft dropped 386 tons of high explosive and 70,000 incendiary bombs. In November, while **London** still remained a target, the raids became more wide-spread, and it was during this month that the centre of Coventry was shattered and the city of **Birmingham** attacked on three successive nights with much destruction and loss of life. Then as the main attack shifted to the ports, Liverpool, **Bristol**, Portsmouth and Southampton suffered heavily and later other cities, including **Plymouth** and **Glasgow**, passed through the fire.

Meanwhile, in a sharp attack on the evening of 29 December 1940, much of the City area of **London** had been laid waste. The raid, in which many thousands of incendiary bombs were employed, came at the hour of low-water level in the **Thames**. Early in the attack water mains were broken by high-explosive bombs and many fires raged unabated. Eight Wren churches were destroyed or damaged. The Guildhall was ravaged by fire and blast and St. Paul's Cathedral saved only by heroic exertions after it had been hit. The damage to railway stations and docks was also serious.

Altogether 41,480 British civilians, 19,750 of them Londoners, were killed in the air raids between September 1940 and May 1941. A further 48,470 were seriously injured, 25,500 in the capital. It is difficult to compare the ordeal of those who lived in the British cities during this period with that of the Germans in the later years of the war. In that phase the bombs were more powerful and the raids more intense. But long preparation and German thoroughness had enabled a complete system of bomb-proof shelters to be built, into which the population was forced to go by iron routine. When the Allies eventually entered **Germany** they found cities wrecked but strong buildings standing above ground, and spacious underground galleries and passages where the inhabitants slept night after night while their houses and property were being destroyed above. In London during the Blitz there were few basements or cellars which could withstand a direct hit. Even the underground railway stations, into which many crowded to stand or sleep on the stairs or platforms, were not immune. The mass of the population slept in their homes or in temporary shelters which they constructed themselves, taking their chance with typical British stoicism.

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At first the few pilots who could be spared from the day battle to fly night patrols met with little success in their efforts to intercept the night bombers, and the defence was forced to rely on the anti-aircraft batteries and balloon barrages. These proved a useful deterrent against

low-level attack and, as experience and equipment improved, the gunners took an increasing toll of the raiders. But in the air, although it had been foreseen that the Germans would probably turn to night bombing on an extensive scale if they found daylight attacks too expensive, **Britain** had been forced to concentrate on the production of equipment and aircraft capable of defeating the enemy by day. It was hoped that, with the aid of searchlights, the day fighters might also be effective at night. But this hope now largely proved vain, partly because the searchlights relied on sound locators which were unsuited to modern conditions and partly because cloud or moonlight often prevented pilots from seeing the searchlight beams. However, during 1940 a method of night interception which did not rely on searchlights was being developed, involving the installation in aircraft of a radar apparatus to locate and track the enemy machine. As this necessitated the use of a trained operator a multi-seater aircraft was needed, and the twin-engined **Blenheim** was chosen as the machine in which to install the radio-location instrument that came to be known as AI (Air Interception).

Briefly, this instrument consisted of a transmitting and a receiving set. The former broadcast a rapid series of impulses from a reflector aerial; some of them, impinging on a target aircraft, sent back echoes which were picked up by the receiver and interpreted in terms of bearing and distance. In practice the pilot flew on information given by ground control while his operator attempted to pick up the enemy machine on the aircraft's radar set. When he succeeded in doing so, he gave his pilot such directions as would bring the fighter within a few hundred yards of the bomber. It was then up to the pilot's eyes and his good shooting. ¹ However, the airborne radar had a restricted range, and before it could detect

¹ But it took months of training before the crews became efficient. To achieve this, pilots went up in pairs and flew hour after hour with two or three radar operators who took turns at the set, practising interceptions. This was complementary to operations for which crews had to stand by night after night at

dispersal.

an enemy bomber in the darkness the fighter had to be brought within three miles of its target at roughly the same height. This could only be done by means of information given to the pilot by a controller on the ground. But it was difficult for this controller to gain accurate knowledge of the German bomber's position. While the coastal radar stations could give warning of the approach of enemy bombers, once they crossed the coast information regarding their course and height could only be provided by the Observer Corps relying, at night, on sound alone. These sources had proved sufficiently accurate for daylight interceptions, when the fighter pilots could compensate visually for small errors in the height and position of the enemy given them, but at night the reports were not precise enough for successful interceptions. Furthermore, the controller had the added difficulty of obtaining accurate information of the position of his fighters flying singly at night.

These problems were eventually solved by the provision of inland radar stations for the direct control of the specially equipped night fighters. The apparatus at these stations showed the position of all aircraft within its range on a fluorescent screen and made possible the tracking of both enemy bomber and **RAF night fighter on the same equipment, the latter being distinguished by a distinctive 'blip' on the screen caused by a special instrument carried by all friendly aircraft and known as IFF (Identification, Friend or Foe).**

But as these inland radar stations did not come into general use until March 1941, the night fighters operated under great difficulties throughout the winter months. Their crews flew long hours in all weathers attempting to perfect their technique, but neither effort nor ardour could overcome the weaknesses of early airborne equipment and of the apparatus used for ground control. From November 1940 to February 1941, although some 12,270 enemy sorties were flown over **Britain, Fighter Command was able to claim only 13 enemy aircraft**

destroyed, almost all the interceptions being achieved by visual means and then only as a result of endless patience and perseverance.

During these months a group of thirty New Zealanders flew with the few **Blenheim** and Defiant squadrons that were the mainstay of the aerial night defence. Flying Officer Herrick, who had joined No. 25 Blenheim Squadron early in March 1940, was one of the pioneers of night fighting, and in September he had shot down three of the four night raiders claimed by Fighter Command during that month. Flight Lieutenant Trousdale and Flying Officer Rabone also won early distinction. Rabone first flew with a detachment of Hurricanes seconded to night defence, and on the night of 22 December 1940, when the Germans attacked **Manchester** and the Midlands in strength, he shot down a bomber which betrayed itself by the glare from its exhaust. Only three of some 300 raiders were claimed by the night patrols during this raid. On a subsequent patrol Rabone had a narrow escape when his engine failed while he was flying over **London**. He baled out and was fortunate to land in one of the parks—the climax to a year of adventure first with a Battle squadron in **France** and afterwards with a Hurricane squadron during the Battle of **Britain**. Trousdale, who had been with a Spitfire squadron during the Battle of **Britain**, now flew as flight commander with No. 255 Defiant Squadron, a unit which, by February 1941, included 15 New Zealanders among its complement of 36 aircrew. One night early that month Trousdale was on patrol in the Humber area, with Sergeant Chunn ¹ as his gunner, when an enemy aircraft, identified as a Heinkel 111, was sighted. As the Defiant closed the range Chunn opened fire, which was returned as the Heinkel dived away. Trousdale followed it down, his gunner meanwhile registering further hits until the enemy machine plunged into the sea. Two more bombers were claimed by New Zealand gunners during February. On the 4th a Dornier 215 was shot down in flames by Sergeant Jonas ² of No. 151 Squadron. A few nights later a Heinkel 111 was destroyed over the Humber by Sergeant Fitzsimmons ³ of No. 255 Squadron.

The early months of 1941 saw the gradual replacement of the

Blenheim by the new and faster **Beaufighter** to carry airborne radar, and several New Zealanders were with the first units to fly this aircraft on night operations. An early success was scored by Sergeant Pyne ⁴ towards the middle of February when, flying as air gunner in a **Beaufighter** of No. 219 Squadron on patrol over **London**, he shot down a **Dornier** bomber. It crashed in **Surrey** and three of the crew who baled out were later captured. Another development in the night battle at this time was the introduction of free-lance patrols by **Hurricanes** and **Spitfires** over the target area on bright moonlight nights. On such occasions—known as ‘**Fighter Nights**’—the anti-aircraft fire was restricted to a certain height, above which the single-engined fighters were left free to engage any raiders they sighted. This innovation brought more squadrons into the task of night interception. Squadron Leader P. G. Jameson, in command of No. 266 Squadron, scored one of

¹ Flight Lieutenant F. J. W. Chunn, DFC; **Te Awamutu**; born **Te Awamutu**, 28 Jun 1918; hardware assistant; joined **RNZAF** Mar 1940.

² Flying Officer D. E. C. Jonas; **Auckland**; born **Auckland**, 21 Feb 1921; salesman; joined **RNZAF** Jul 1940.

³ Pilot Officer H. D. J. Fitzsimmons; born Eltham, 8 Sep 1920; farmer; joined **RNZAF** Sep 1939; killed on air operations, 29 Jul 1942.

⁴ Warrant Officer C. C. Pyne; **Dannevirke**; born **Wellington**, 12 Mar 1921; clerk; joined **RNZAF** Oct 1939.

the first successes claimed by **Spitfires** in these night patrols. This was early in April when **Coventry** was the main target for the enemy bombers. Jameson was flying at 18,000 feet when he saw a **Heinkel** about 1000 feet above him in the moonlight. He climbed and opened fire but was dazzled by the flashes when his incendiary bullets struck the enemy aircraft. He attacked again and had the satisfaction of seeing the

Heinkel catch fire and go down with large pieces breaking away. His success was later confirmed.

Although the destruction of 22 night raiders was claimed by Fighter Command during March 1941, the aircrews continued to experience difficulties and disappointments. One pilot reported that he was robbed of a victim through being blinded by searchlights 'just after engaging the enemy at close range and seeing a red flash in the aircraft'. On another occasion two New Zealand sergeants forming the crew of a Defiant narrowly escaped disaster among the Welsh mountains when pursuing a Heinkel that was indulging in violent evasive tactics and hotly returning their fire. Finally the German entered a heavy bank of cloud and the British aircraft pulled up just in time to clear the summit of a hill. Other crews had the exasperating experience of sighting an enemy bomber in the darkness and then losing it before they could press home an attack. Many were denied even the thrill of the chase. They went up night after night, the pilots leaning forward in their cockpits vainly trying to see, in the darkness or the half light of the moon, something of the enemy bombers towards which the radar operators were trying to direct them. There were still difficulties with both aircraft and equipment. The Germans bombed the airfields from which the night fighters were operating and occasionally, by way of variation, waited above the flare path to shoot them down as they came in to land. Night flying had other hazards— there were balloon barrages and anti-aircraft fire to be avoided. One New Zealand crew actually flew into a balloon cable in bad weather; the pilot was killed but his air gunner was lucky enough to escape by parachute.

However, by the middle of April 1941, the months spent in training and experiment, in testing new equipment and in solving the teething troubles of the Beaufighter, began to bear fruit. More pilots now reported interceptions in the course of their patrols and, although many encounters were inconclusive, there was a marked increase in the number of enemy machines destroyed. Eventually during the first ten nights of May 1941, which was a period of fine weather and good

moonlight, Fighter Command was able to claim 90 German aircraft destroyed.

New Zealand airmen took a prominent part in the night fighting during this period both as pilots and as air gunners, and 16 of these claims resulted from combats in which they were involved. On the night of 3 May Sergeant Scott ¹ accounted for two raiders in the course of a single patrol; the first, a Junkers 88, he set on fire over Merseyside, and shortly afterwards he sent a Dornier down in North Wales. A few nights later Scott's accurate shooting claimed another victim near Liverpool when '... after several long bursts the bomber caught fire and dived to explode on the ground.' On patrol during this same raid, Flying Officer Verity sighted a Heinkel some distance below him in the light of the fires in the burning city. He dived at full throttle to engage the bomber and 'after a short burst in the nose of the enemy machine there was a terrific flash which lit up the sky followed by an explosion that absolutely shook the Defiant.' Sharp decision and quick action were often needed to convert a sighting into a successful interception. For example, on the night of 5 May while patrolling over **Glasgow during a heavy attack on that city, Flight Lieutenant Wilson ² saw a Heinkel below him flying in the opposite direction. He made a steep turn but soon found he was overshooting his quarry so lowered his undercarriage to reduce speed and enable an attack to be made. Strikes were seen on the enemy machine which caught fire, part of its tail falling off as it went down.**

In the early hours of 8 May, when German bombers operated over **Britain in strength with Liverpool and **Manchester** as their main objectives, bright moonlight enabled the night fighters to make many interceptions during their patrols in the vicinity of these cities. Verity and Sergeant Taylor, ³ flying Defiants of No. 96 Squadron, were in action within a few minutes of each other. The crew of the bomber attacked by Taylor baled out and the pilot was found some hours later hanging from the top of a tall tree in his parachute harness. Verity, after sending one Junkers down on fire, sighted another almost immediately**

afterwards.

The German bomber, instead of taking evasive action, turned to make a head-on attack and Verity just managed to avoid a collision. Sharp exchanges followed before the Junkers was lost in the darkness. The same night Sergeant Aitchison,⁴ gunner in a Defiant of No. 255 Squadron, shot down a Heinkel within sight of his own

¹ Flying Officer W. J. Scott, DFM; **Auckland**; born **Auckland**, 19 May 1918; farmer; joined **RNZAF** Jan 1940.

² Squadron Leader D. F. Wilson; **RAF**; born Wairoa, 27 Aug 1917; joined **RAF** Apr 1939; transferred **RNZAF** Jan 1944.

³ Flight Lieutenant G. S. Taylor; born **Oamaru**, 20 Jul 1918; civil servant; joined **RNZAF** Dec 1939; killed in flying accident, 9 Feb 1943.

⁴ Flying Officer R. T. Aitchison; **Auckland**; born **Taihape**, 4 Sep 1918; warehouseman; joined **RNZAF** Jul 1940.

airfield where 'ground crews and others', says the squadron record, 'had a grandstand view of the bomber catching fire and coming down like a flaming torch.'

The next few nights saw the climax of the German raids on **Britain**, and on each occasion more successes were scored both by single-engined fighters and by Defiants and Beaufighters carrying special radar equipment. On the night of 9 May, when Hull was the target for a heavy raid, No. 255 Defiant Squadron, in which nearly half the aircrew were New Zealanders, succeeded in destroying six enemy bombers without loss to themselves.¹ Flight Lieutenant Trousdale and his gunner, Sergeant Chunn, claimed two Heinkels within the space of a few minutes. This was after they had already seen and lost one bomber and had been fired upon by another. Their first victim was seen to crash south-east of

Leconfield; then, on returning to patrol over Hull at the height of the German attack, they sighted another Heinkel silhouetted against the glare from the burning city. After several bursts had found their mark, the bomber caught fire and dived into the sea. Two more raiders were destroyed this night by the accurate shooting of New Zealand air gunners in the same squadron, Sergeants Maul ² and McChesney. ³ One German machine went down in flames on the outskirts of the city, while the other, after a long chase, was seen to crash into the North Sea. Further successes were obtained the following night when **London** was the main target for the heaviest raid of the whole Blitz, upwards of 500 aircraft dropping 708 tons of high-explosive bombs and 86,700 incendiaries. Bright moonlight and clear weather favoured the defenders, who were able to claim 24 of the raiders. Two of them were shot down by Squadron Leaders Aitken ⁴ and Jameson who were in command of Hurricane and Spitfire squadrons engaged on night interception as 'catseye' fighters. A third bomber was destroyed by Sergeant Sampson ⁵ who, after a running fight over the **Thames**, saw his victim crash and blow up on the ground near Gravesend. Another was shot down on the opposite side of the Estuary by Pilot Officer

¹ The squadron record states that this achievement evoked 'a deluge of congratulatory signals' from Fighter Command, the Chief of the Air Staff and the Secretary of State for Air. The total claims by Fighter Command this night amounted to 15 enemy aircraft destroyed.

² Flight Sergeant N. H. Maul; born Feilding, 30 Jan 1921; farmhand; joined **RNZAF** Jul 1940; killed on air operations, 22 Feb 1943.

³ Flight Lieutenant R. I. McChesney; born Kawhia, 4 Oct 1913; bricklayer; joined **RNZAF** Jan 1940; killed in flying accident, 6 Dec 1942.

⁴ Wing Commander R. F. Aitken, OBE, AFC; born Outram,

Otago, 15 Sep 1913; joined **RAF** 1937; a pioneer of air-sea rescue; commanded No. 3 Sqdn, 1941–42; Wing Commander, Night Operations, No. 11 Fighter Group, 1942; commanded RAF Station, Hawkinge, 1942; RAF Station, Bradwell Bay, 1942–43; No. 150 Airfield, Bradwell Bay, 1944–45.

⁵ Flight Lieutenant R. W. Sampson; born **Dannevirke**, 21 Dec 1908; farmer; joined **RNZAF** Jun 1940; killed on air operations, 18 Feb 1944.

I. S. Smith. There were also a number of ‘probables’, but many pilots and air gunners flew without their efforts being rewarded and cursed their luck when they failed to make an interception or when the enemy machine evaded them in the darkness after a brief exchange of fire.

With this attack on **London** the intensive night raids on **Britain**, which had begun eight months earlier, virtually came to an end. Thereafter the scale of attack was much lighter. In fact, throughout the rest of the year the Germans devoted most of their attention to targets at sea or near the coast and to minelaying. The main reason for this change of tactics was the impending attack on **Russia**, for which most of the bombers in the West were withdrawn, leaving only a small force to aid the German Navy’s attempt to blockade the **British Isles**.

While the end of the continual night raids came as a great relief to the people of **Britain**, to the aircrews of the night fighter squadrons it was something of a disappointment. It seemed that an enemy, over whom they were slowly but surely gaining the mastery, had slipped from their grasp. Nevertheless, efforts to defeat the night bomber were continued in anticipation of a renewal of heavy attacks in the autumn. This indeed was the German intention, frustrated by their failure to bring about the early capitulation of **Russia**. One development was the formation of flights of Havoc aircraft carrying a searchlight in addition to the special radar apparatus for air interception. The Havoc, developed from the American Boston aircraft, carried a crew of two, a pilot and a navigator-radar operator. The searchlight was mounted in the glass nose

of the machine and accumulators were carried in the bomb bay, but owing to the great weight of this equipment no armament could be carried, so this was provided by one or two Hurricanes which flew in close formation with the Havoc—a difficult and somewhat hazardous business at night. The team was first put in contact with a target by ground control and, when within radar range, the operator in the Havoc guided his pilot into a suitable attacking position. The searchlight was then switched on to illuminate the enemy bomber for attack by the accompanying fighter. This somewhat complicated procedure was an attempt to provide a means of attack on dark nights when the chances of visual sighting were negligible. Wing Commander A. E. Clouston pioneered the development of this new form of night defence and supervised the formation and training of units, testing each aircraft before it was delivered to the flights. He was subsequently commended for his 'hard work and enthusiasm in getting this most promising form of night fighting on an operational footing.' Other New Zealand airmen were among the crews who spent long hours patiently endeavouring to perfect this technique. After many trials the Havocs succeeded in illuminating and holding their targets while the attendant fighters intercepted them. Unfortunately, by the time the teams were ready for operations the enemy effort had dwindled to such small proportions that the scheme had no chance to prove its worth. Later when the opportunity came, the Havocs were too slow for the faster bombers which the Germans were then using.

Meanwhile, throughout the second half of 1941, the orthodox night fighter squadrons continued to fly patrols against the enemy's sporadic raids. But the small and scattered attacks gave few chances to the defenders, while the minelaying aircraft which flew in low to avoid detection by the coastal radar stations were particularly hard to intercept. Yet on the occasions when the German machines did venture overland the night fighters achieved considerable success. In June, when the Medway towns were attacked, seven enemy aircraft were claimed out of fewer than a hundred operating; on two successive nights in July eleven out of 170 were claimed destroyed over Hull; and on the

first night of November when some fifty aircraft attacked Merseyside, six were destroyed.

Many of these successes came as a result of the technical aids which had now been provided in larger measure. A typical example was the destruction of a Junkers 88—his fifth victim at least—by Flying Officer Herrick one dark night in July. Whilst on patrol in a Beaufighter of No. 25 Squadron he was directed towards a German bomber by ground control, and after his radar operator had picked up the enemy machine, a chase of several minutes followed before Herrick sighted a Heinkel slightly below and just ahead. A diving turn enabled him to make a stern attack, ‘using his guns in the manner of a hose pipe’. The enemy machine caught fire and dived to explode on the ground.

Reports of other engagements, in several of which New Zealand pilots and air gunners were concerned, tell of the damaging or destruction of German bombers in similar circumstances and confirm that the aircraft fitted with radar were becoming increasingly successful in intercepting night raiders. But the opportunities for doing so grew steadily fewer and for most of the airmen flying with the night fighter squadrons the last months of 1941 were a period of utter monotony—of much time spent in flying training and practice, relieved only occasionally by sorties against brief enemy raids. It was only natural that such inactivity should prove irritating to the average fighter pilot. One of them expressed his feelings at this time in these words:

Flying is great fun if there is some point in it; if something is likely to happen. But each time I was on these night patrols I got more and more fed up and longed for the minute when my wheels would touch earth again. Once I did see a Heinkel going in the opposite direction just below me. I tried to turn but it was no use. It had disappeared. I flew on night after night never seeing any more.

* * * * *

During the period of heavy night attacks on [Britain](#), the Royal Air

Force had not been content to remain wholly on the defensive. In addition to the bombing raids on **Germany** itself, action had been taken against the night bombers and the bases from which they operated. In October 1940, when it became evident that German bombing policy had been revised in favour of night attack, Blenheims of Bomber Command had begun flying patrols over enemy airfields in Northern France and the Low Countries. But with other targets demanding the attention of the small bomber force, such patrols could only be flown intermittently. In December, therefore, No. 23 Squadron of Fighter Command, already experienced in night operations over **Britain** throughout 1940, was selected to specialise in these missions, now known as 'Intruder' patrols. Its task was defined as 'the attack of enemy bombers flying in the vicinity of their airfields and the attack of the bases themselves, particularly aircraft on the ground.' The poorly armed and slow Blenheims with which the squadron was equipped were not the best aircraft for these duties, but the faster and better-equipped Beaufighter could not be released for the purpose, whilst other night fighters did not possess sufficient endurance. To prepare No. 23 Squadron for its new role, navigators were brought in, the Blenheims fitted with new engines and rear turrets added. The secret radar equipment was removed from the aircraft so that it would not fall into enemy hands. External bomb-racks were also fitted as the Blenheims were now to carry from eight to twelve 20-pound bombs for attacks on the enemy ground organisation. 'All the aircrew,' writes one New Zealand member of the squadron, 'were delighted at the prospect of switching over to the offensive after long months of tedious and none too successful defensive patrols. Our only concern was whether our rather worn-out old Blenheims would stand up to the longer flight across to the Continent. But as things turned out they performed the task nobly and there were seldom reports of engine trouble.'

Operations commenced towards the end of December, targets being selected on the basis of information obtained from intercepted radio messages which betrayed the particular airfields the Germans were using and often the hour their bombers were expected to return. The timing of

the intruder missions was important since, if the Blenheims arrived too early at an airfield waiting to receive returning bombers, their control would direct them to land elsewhere. A high standard of navigation was also demanded of the British crews, who had to beware of being deceived by dummy or decoy airfields. ¹ By the end of March 1941 No. 23 Squadron had flown 94 sorties over enemy territory, during which 13 German aircraft were attacked, two shot down, six probably destroyed and others damaged. Successful attacks had also been made on airfields in **France**. Five Blenheims were lost in these operations.

New Zealand airmen took a prominent part in these early missions, twelve of them flying with No. 23 Squadron as pilots, navigators and gunners. Flying Officer Gawith, ² who had joined the squadron early in 1939 to specialise in night fighting, captained one of the six Blenheims which flew the unit's first intruder sorties on the night of 21 December 1940. Four enemy aircraft were sighted and three airfields attacked during the patrols, which were completed in bitterly cold weather. Soon Gawith was leading an all New Zealand crew, with Sergeant Hogg ³ as navigator and Sergeant Forsyth ⁴ as air gunner. This team later scored several successes but at first results came slowly. 'Shooting down enemy aircraft in their landing circuit proved a formidable task,' writes one of the pioneer captains. 'Navigation was also a problem as we fighter pilots were rather rough and ready with this and soon had our navigators lost on some of the early sorties. They, poor souls, had come from Bomber Command where they were accustomed to pilots who flew straight and level on predetermined courses! However, gradually things got sorted out and we became experts at locating particular enemy bases and finding our way home after a Cook's Tour of airfields in **France**.'

Among the squadron's early successes was the probable destruction of two Heinkels in the vicinity of Lille airfield on the night of 25 February. Sergeant Parsons ⁵ was air gunner in the **Blenheim** which made the attacks. A few nights later Sergeant McDermott ⁶ shared in attacks on two German bombers in the same area, both of which were seen to be damaged. After a subsequent patrol, during which an enemy

airfield had been bombed, this New

¹ Dummy airfields were an arrangement of lights or other means to attract intruders while decoys were real airfields not being used for operations but solely for deception.

² Wing Commander A. A. Gawith, DFC, Bronze Star Medal (US); **Masterton**; born **Masterton**, 9 May 1916; joined **RAF** Jun 1938; transferred **RNZAF** Jan 1944; commanded No. 1451 Flight, 1941; Staff duties, No. 9 Fighter Group, 1942; Senior Liaison Officer, 9th Air Defence Command, **USAAF**, 1944; commanded **RAF** Station, **Cleave**, 1944–45.

³ Flight Lieutenant F. E. Hogg, DFC and bar, **Croix de Guerre** (Bel); **Wellington**; born **Edinburgh, Scotland**, 3 Oct 1919; warehouseman; joined **RNZAF** Nov 1939.

⁴ Flying Officer C. L. M. Forsyth, DFC, DFM; born **Tauranga, Auckland**, 11 Feb 1914; timber worker; joined **RNZAF** Feb 1940; killed on air operations, 8 May 1944.

⁵ Warrant Officer E. E. Parsons; **Auckland**; born **Auckland**, 26 Dec 1913; bookbinder; joined **RNZAF** Feb 1940.

⁶ Flying Officer J. A. McDermott; **Wellington**; born **Gourock, Scotland**, 11 Apr 1915; clerk; joined **RNZAF** Feb 1940.

Zealand gunner had a narrow escape. One bomb which had failed to release during the attack exploded on landing, killing the navigator and setting the aircraft on fire. McDermott and his pilot were fortunate to suffer only slight burns. Gawith's crew had an eventful sortie on 8 March. They left from **Manston**, in **Kent**, shortly after eight in the evening and arrived over the airfield at **Beauvais** about one and a half hours later, flying at 1000 feet. Gawith afterwards reported:

We found the whole area brilliantly lit up with flare path, leading lights

and taking off lights stretching over approximately five miles from north to south. Saw navigation lights of aircraft gliding in to land at about 100 feet but decided I couldn't reach it so gave chase to another enemy. This aircraft was circuiting the aerodrome and although I gave chase at full boost was unable to catch it until we had completed four or five circuits and enemy aircraft began to lower his undercarriage. I then opened fire and held it to point. blank range. We narrowly averted a collision and passed just above the enemy aircraft. Ammunition was seen to enter fuselage and starboard engine which emitted a sizeable explosion. I broke away and turned sharply but members of the crew had lost sight of enemy aircraft which must have doused its navigation lights. We think enemy aircraft attempted to land and ran into a light A.A. Barrage which went up around the aerodrome. Within 30 seconds of attacking the Heinkel 111, I saw another enemy aircraft with navigation lights in front of me and closed to fire on what turned out to be a Dornier 215 or 17. Ammunition seen to enter fuselage. Ceased fire at about 15 yards as I went through slipstream. Passed enemy aircraft again about 20 feet above but then lost sight of it. By this time all lights on the ground were doused so we flew off about 10 miles north, climbed to 6000 feet and returned to aerodrome which we could see in moonlight. As we passed over on a dummy run, aerodrome lights came on so I turned and flying from south to north laid a stick of bombs which were seen to explode parallel to flare path and about 100 yards to the east of it. We saw the navigation lights of another aircraft gliding in to land just as our bombs were bursting. Did not see what happened to this enemy machine, but all aerodrome lights were immediately doused. As we could not see any more navigation lights about we set course for base and landed at 2248 hours.

Although New Zealanders continued to fly intruder patrols over **France**, it was not until the night of 9 April that one of them again figured in an attack. Sergeant Fletcher ¹ was air gunner in a **Blenheim** which bombed a convoy of motor transport on the Goderville-Bolbec road, in northern **France**. On the same night Flying Officer D. H. Ward flew one of two Hurricanes from No. 87 Squadron—now beginning to fly

occasional intruder patrols—in a ground strafing attack on Caen-Carpiquet airfield. Afterwards the fighters machine-gunned a goods train, buildings and gun positions, and although fired at by heavy and light flak both returned unscathed.

¹ Warrant Officer W. T. Fletcher; England; born Wairoa, 14 Oct 1917; electrician; joined **RNZAF** Feb 1940.

Six days later the **Blenheim** in which Sergeant Reilly ¹ was flying as air gunner caught an enemy aircraft taking off from this same airfield, but no results of a first attack were seen and the enemy machine was lost in the darkness. A later interception over the same airfield appeared more successful. Fletcher was concerned in an unusual encounter one night towards the end of April. His **Blenheim** was nearing the French coast on its homeward flight when a large four-engined bomber was sighted flying on the same course. It was soon identified as a Focke-Wulf Condor on its way out to attack shipping in the **Atlantic**. The **Blenheim** closed and opened fire. The first bursts must have entered the Condor's bomb-load for there was a blinding flash and a terrific explosion as the enemy machine blew up. The **Blenheim** was tossed about and the air filled with debris. On landing, the British crew discovered one large piece of armour plating, nearly three feet square, sticking out of the leading edge of one of the **Blenheim**'s wings.

During April No. 23 Squadron began re-equipping with Havocs which, possessing greater endurance than the **Blenheim**, could make attacks farther afield, including in its range airfields in **Holland** and near **Paris**. This was an advantage as recent moves of the **Luftwaffe** had left unoccupied some of the airfields most frequently visited in the previous months. There was now also an increase in activity by Hurricanes and Defiants of other squadrons, although, of eleven aircraft claimed as destroyed during the month, six were credited to No. 23 Squadron, together with four probably destroyed and three damaged. In addition there were a number of successful attacks on enemy airfields: in one

bombing attack early in May Gawith, with his New Zealand crew, destroyed the entire telephonic communication system of the German bomber group at Deurne, near **Eindhoven**. On the night of 3 May Sergeant Fletcher flew in a Havoc which went to the Lille area and damaged a Junkers 88 and a Heinkel 111. Two nights later McDermott shared in the destruction of a Heinkel 111 encountered in the same area. Fletcher took part in another engagement on the 11th when, over the Caen area, an enemy aircraft was damaged.

The peak of intruder achievement in 1941 was attained in May, but early in that month the German night offensive against **Britain** declined as preparations were hurried forward for the opening of the Russian campaign on 22 June. The prospects of success for intruder crews therefore began to diminish and they were given permission to bomb alternatives such as ports and communication targets. With the flow of **Luftwaffe** units to the Eastern Front and

¹ Pilot Officer C. C. Reilly; born **Auckland**, 15 May 1913; hardware assistant; joined **RNZAF** Feb 1940; killed on air operations, 28 Oct 1942.

the limited activity from those that remained, it soon became a matter of chance whether an active airfield would be found in the West. Thus while the bombing of German air bases was continued, it was only occasionally that crews were given the opportunity of attacking enemy aircraft. One such night was 12 August when Sergeant Campbell ¹ flew as air gunner in a Havoc of No. 23 Squadron on a sortie over Gilze-Rijen airfield. Seven enemy aircraft were sighted and attacked during the three-hour patrol. Two were claimed as destroyed and four damaged. But few crews had such luck, and during the closing months of the year the effort was considerably reduced.

Although, throughout 1941, the intruder missions had been on a modest scale, they were important in that they laid the foundation for a type of operation that was to be developed with great success in the later

years. Nor had they been unproductive. Nearly 300 attacks on German airfields are recorded and there is evidence that substantial disturbance was caused to the operations of the German air forces in the West. German records reveal that the loss of as many as 19 bombers can be attributed to the activities of the intruder aircraft during 1941. In comparison with what was achieved by other fighter operations during that year, and considering the small force engaged, this was in itself a creditable achievement.

¹ Warrant Officer D. B. Campbell, DFM; **Dargaville**; born **Dargaville**, 8 Jun 1920; postman; joined **RNZAF** Feb 1940.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 7 – AIR WAR AT SEA

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Air War at Sea

BY the end of 1940 aircraft had begun to play a dual role in the war at sea. On the one hand, in co-operation with the Royal Navy, they protected the trade routes, escorting convoys and hunting U-boats and surface raiders; on the other, in a more independent role, they had begun to attack the enemy's sea communications along the European seaboard with mine, bomb and torpedo. But at this stage, when the initiative lay with the enemy, the emphasis was more on the defensive task—the guarding of the sea lanes by which **Britain** was receiving the food and supplies upon which her survival depended.

With the German capture of **Norway** and the occupation of northern **France**, **Britain's** command of her sea approaches was more seriously threatened than it had ever been in the First World War. Air and sea bases were now available to the enemy in the Biscay area and in **Norway** from which attacks upon British supply routes could more easily be launched. **Britain's** harbours and ports were also exposed to heavy air attack. In July 1940 the bombing of ships in the Channel from German air bases in **France** forced the Admiralty to abandon this route for convoys, and soon the only way by which ships could reach and leave the **British Isles** was through the narrow passage between the Hebrides and Northern **Ireland**. With the collapse of their plan to reduce **Britain** by invasion, the Germans intensified their air and sea attacks on her supplies, so that the closing months of 1940 found **Britain** fighting for control of the North-Western Approaches as a matter of life and death.

At first, aircraft and surface raiders caused heavy losses. In a three months' cruise one raider sank 19 merchantmen and sent a further two as prizes to **Brest**. From September onwards the long-range Focke-Wulf Condors were reporting and bombing convoys in the Western Approaches. These aircraft flew from bases near **Brest** and Bordeaux right round the **British Isles** to **Norway**, where they refuelled and made a return flight the next day. But the U-boats soon proved an even greater

menace. The Germans had started the war with 56 of these vessels, less than half of them ocean-going types, yet this small fleet under Admiral Doenitz, himself a former U-boat captain of the First World War, was remarkable for the skill and audacity of its personnel. By the end of October 1940 they had sunk 471 ships, totalling more than two million tons—this in spite of the fact that the Admiralty had introduced the convoy system soon after the outbreak of hostilities. However, the shortage of British escort vessels, rendered more acute through losses and damage during the evacuation from **Belgium** and **France**, meant that, on occasion, no more than two escorts were available for a convoy of 40 merchant ships. While evasive routing was often successful in getting the convoys through the outer areas, the concentration of shipping in the North-Western Approaches provided many targets.

October was a black month. Two convoys were cut to pieces by U-boats and suffered the loss of no fewer than 31 ships. Surface raiders also took their toll—this was the period of the gallant *Jervis Bay* action and the epic of the *San Demetrio*.¹ The same month German aircraft were particularly active in attacking ships to the west of **Ireland**. On 26 October the 42,000-ton *Empress of Britain* was bombed and set on fire in this area. She was torpedoed and sunk the following day. A further seven ships were bombed and either sunk or severely damaged during the next fortnight. ‘Now our life-line, even across the broad oceans, and especially in the entrances to the Island, was endangered,’ writes the British Prime Minister. ‘I was even more anxious about this battle than the glorious air fight called the Battle of **Britain**.’ Plans were made to lay a carpet of thousands of contact mines in the North Channel to prevent U-boats from closing this only remaining entrance to the Mersey and Clyde. In the event, counter measures by the Royal Navy and by **Coastal Command** succeeded in driving the U-boats farther out and thus overtook preparations for the dynamite carpet. This, however, was but the opening phase of the long and bitter struggle which came to be known as the Battle of the **Atlantic**.

The first U-boats of the large numbers laid down by **Germany** at the

beginning of the war were ready for service early in 1941. They were of two standard types, the 500-tonners, carrying a crew of 45, and the 740-tonners, with a crew of about 55. These craft were specially constructed to withstand the underwater blast of

¹ The *Jervis Bay*, an armed merchant ship, was acting as ocean escort to a convoy of 37 ships when, in the late afternoon of 5 November 1940, they fell in with the German pocket battleship, *Admiral Scheer*. While the convoy scattered, the *Jervis Bay* closed with her overwhelming antagonist and opened fire with her old 6-inch guns. Within an hour the *Jervis Bay* was burning fiercely and out of control. She sank shortly afterwards with the loss of 190 officers and men, including her commanding officer, Captain E. S. F. Fegen, RN. Meanwhile the other ships had scattered and the *Admiral Scheer* was only able to overtake and sink five before darkness fell. The tanker *San Demetrio*, carrying 7000 tons of petrol, was set on fire and abandoned. But the next morning the crew reboarded their ship, put out the fire and, without navigational aids, succeeded in bringing her to a British port.

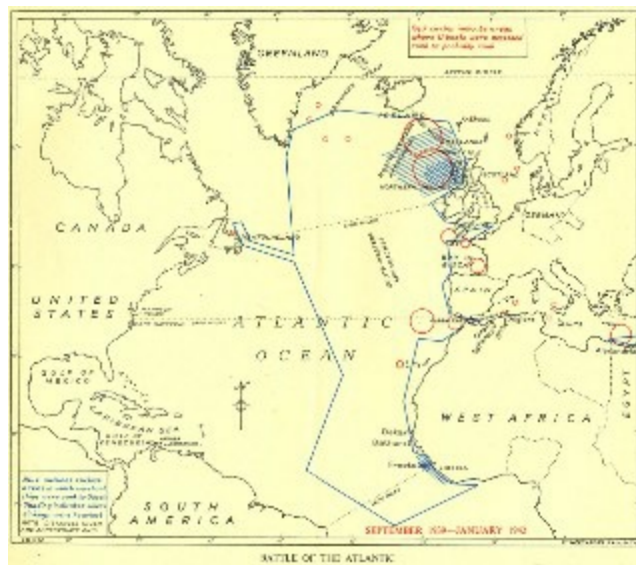
depth-charges and had an extra pressure hull of high-tensile steel. There were two sets of machinery—diesel engines for propulsion on the surface and electric motors for use when submerged, the latter also serving as dynamos for recharging batteries on the surface. Normal cruising speed of eight knots gave an endurance of some 10,000 miles, which meant that these vessels could spend up to three months at sea. When the discomforts and strain of life in submarines are realised, such extended cruises provide an indication of the stamina and morale of the U-boat personnel.

With their steadily expanding U-boat fleet and the development of bases in **Norway** and in the French Atlantic ports, the Germans were able to increase the scale of their attacks. By March 1941, after a temporary lull during the winter months, a renewed offensive in the Western Approaches was in full swing, with the U-boats hunting in packs and attacking by day as well as by night. 'I will show that the U-boat

alone can win this war,' declared Admiral Doenitz. 'Nothing is impossible to us.' It was no idle boast. Losses mounted alarmingly—142 ships, of over 800,000 tons, were lost in 13 weeks between March and May—some of the sinkings taking place farther out in the **Atlantic** to the south of **Iceland** and as far afield as **Freetown, West Africa**.

Early in March the British Prime Minister decided that 'extreme urgency was to be given to measures designed to defeat the German attempt to strangle our food supplies and our connection with the **United States**', and it now became the prime responsibility of the air squadrons of **Coastal Command** to assist the **Royal Navy** in meeting this threat. The organisation by which the naval and air efforts could be coordinated was already being enlarged and strengthened. At the centre there was closer liaison between the Admiralty and **Coastal Command** headquarters in **London**, while at a lower level there was expansion of the coastal air groups. The geographical boundaries of the coastal groups coincided with those of the naval commands on shore, and in each case the naval and air staffs worked side by side in what were known as Area Combined Headquarters, where the operations room was common to both. It was from these control centres that orders and information were transmitted to the operational bases and to ships and aircraft on patrol. The Area Combined Headquarters which directed the Battle of the **Atlantic** for the next four years were situated at Liverpool, **Plymouth**, and Rosyth.

Although the second year of war saw a considerable increase in the effectiveness of the aid given to the **Royal Navy** by the squadrons of **Coastal Command**, many of the earlier difficulties persisted. There was still a shortage of aircraft, a lack of suitable weapons



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and a paucity of airfields in the vital north-western area. Bases in Southern Ireland were denied, while much of the terrain of Northern Ireland, and still more that of the west coast of Scotland, was unsuitable for airfields. Of those that were presently constructed in these parts, several were of necessity set close to hills, which made landing at night or in thick weather both difficult and hazardous.

The development of air patrol and attack had been proceeding slowly since the early days of the war. Experience had shown that the best height to fly for visual location of surfaced U-boats was between 1500 and 2000 feet, but increasing vigilance on the part of the U-boat lookouts often resulted in the aircraft being seen by them first. The watch maintained by the German U-boat commanders when patrolling on the surface was of a high order, and from the moment the alarm was sounded, the vessel could be under the surface in 25 seconds. Consequently most of the air attacks were made on swirls or foam marks left on the surface after U-boats had crash-dived. Under such conditions the anti-submarine bombs carried by aircraft were virtually useless, and a modified form of the naval depth-charge was gradually adopted as a more effective weapon. But at first these depth-charges were set to explode at depths of 100 to 200 feet and were at times released up to five minutes after the U-boat had vanished; yet once a submarine completely submerged, its position, in both depth and direction, was a

matter for guesswork. Thus very few attacks inflicted serious damage and, until January 1941, only one German U-boat was destroyed by air attack alone. This encouraged Admiral Doenitz to boast that 'an aircraft has as little chance of hurting a U-boat as a crow has of killing a mole'—a boast which he later had cause to regret.

Various methods were tried to improve the efficiency of the air attacks by reducing the time lag, but until the advent of improved radar no real advance took place. As this equipment became more reliable and was fitted to more aircraft, it proved of vital assistance to aircrews in making an unseen approach, using cloud cover until the last possible moment. But even then it was discovered that, unless the cloud base was fairly low, U-boats could still submerge before the aircraft reached them. The answer was found in making aircraft more difficult to see from the bridge of a U-boat, and after various experiments in camouflage it was discovered that plain white on all sides and under surfaces of the aircraft gave a remarkable degree of invisibility in the cloud and sky conditions prevalent in northern latitudes. This was the origin of the familiar 'white crows' of **Coastal Command** and, with certain refinements, this white camouflage remained the standard colour for anti-submarine aircraft throughout the war.

During 1941, 120 New Zealanders served with the anti-submarine squadrons of **Coastal Command** as pilots, navigators, wireless operators and air gunners. Many were with the Anson and Hudson squadrons which did valuable work at this period of the war; others flew with the Sunderlands, while several were with the first Whitley and Wellington squadrons to operate against the U-boats. By September 1941, 54 New Zealanders had lost their lives while serving with the command, some when their machines developed engine trouble over the sea, others when they failed to find a landing area in bad weather. In one case a Hudson crashed into a balloon barrage and all the crew were lost. Several crews failed to return from reconnaissance patrols in the vicinity of the enemy coast, while a few disappeared completely on long patrols over the **Atlantic**.

Throughout the winter of 1940–41 much of their work consisted of flying escort patrols to convoys approaching and leaving the British coast, the length and range of the patrols being governed by the endurance of the various types of aircraft. Such missions were fatiguing and usually very monotonous. The worst enemy was the weather which, in northern and western districts, could be very treacherous. Aircraft might leave their bases in clear weather only to find on their return, six to eight hours later, that cloud or mist had descended, making the location of a base for landing exceedingly difficult. This applied particularly on the west coast of **Scotland** and in **Iceland**.

Coastal Command aircraft began to operate from **Iceland** early in April 1941, and several New Zealanders flew with the first Sunderland squadron and the detachment of Hudsons sent there from the **United Kingdom**. As well as escorting convoys and hunting U-boats, these aircraft flew regular ‘ice patrols’ over the Denmark Strait as far as Greenland in order to watch the extent and movement of pack ice in that passage, through which German raiders might enter the **Atlantic**. On the **Iceland** airfield the Hudsons had to be protected from the fierce and sudden gales by mooring them to concrete blocks and providing windbreaks of lava rock faced with turf. Even so, on one occasion a gale blew six aircraft from their dispersal point, each machine dragging the concrete mooring blocks along with it. A Nissen hut is reported to have ‘taken off’ and ‘crash-landed’ on a runway. These huts, in which the aircrew lived, were constructed of corrugated iron and were half cylindrical in shape. In winter, covered with snow, they looked like the igloos of the Eskimoes. By contrast, in summer lava dust spread over everything, causing sore throats and severely shortening the life of clothing and boots. It was while based in **Iceland** that Flying Officer Tye,¹ as captain of a Hudson of No. 269 Squadron, had two encounters with U-boats towards the end of August 1941. Both submarines were attacked before they had completely submerged—this in itself was an achievement at this time. On the second occasion the U-boat, in its anxiety to dive quickly, apparently flooded its forward tanks too rapidly as its stern was sticking out of the water at a sharp angle when Tye

dropped the depth-charges. A large patch of oil appeared on the surface shortly afterwards.

From June 1941 the patrols began to assume a more offensive character. This was the result of a change in policy, under which close air escort to every convoy was discarded, to some extent, in favour of sweeps and searches in areas where U-boats were known to be lurking—their presence revealed by sightings or by the interception of their wireless transmissions. A few patrols were also flown over the **Bay of Biscay** in an effort to intercept U-boats proceeding to their stations in the **Atlantic**. The following months saw a marked increase in the number of sightings and attacks, and although few U-boats were completely destroyed from the air the constant harassing began to have its effect, particularly in the Western Approaches. Sinkings of British shipping in this region fell rapidly as the U-boats began to show a strong disinclination to enter the waters swept by aircraft.

A unique incident occurred on the morning of 27 August 1941. Shortly after dawn a Hudson on anti-submarine patrol sighted U.570 on the surface about 80 miles south of **Iceland**, but before an attack could be made the submarine dived. The Hudson dropped smoke floats to mark the spot and sent off a sighting report. Two hours later another Hudson sent from **Iceland** sighted the U-boat just as she was surfacing. The submarine tried to crash-dive, but the aircraft was too quick and dropped four depth-charges. They were well placed, though the damage caused was not lethal. However the explosions, the smashing of instruments, and some slight flooding caused panic among the U-boat's crew. Convinced that all was lost and fearful of chlorine gas, the German commander brought his vessel to the surface. Men appeared on deck, while the Hudson, fully master of the situation, sent off a signal and by skilful manoeuvring and judicious use of her machine guns prevented the Germans from manning their anti-aircraft weapons. But the enemy was in no mood to fight it out. He waved a white flag—actually the captain's shirt. Until the afternoon, in tempestuous weather, the Hudson circled her prize. Then, with fuel running low, she

¹ Wing Commander A. F. H. Tye, DFC; born Dunedin, 19 Apr 1921; clerk; joined **RNZAF** Dec 1939; killed on air operations, 1 Jul 1945.

was relieved by a Catalina, and further relays of aircraft kept watch during the night, occasionally dropping flares to keep the U-boat in sight. A trawler arrived and next morning U.570's crew were removed and she was taken in tow, to be beached in **Iceland**. Later she was sent to England where technical details were obtained which greatly assisted British anti-submarine measures.

In September 1941 all but 6 per cent of the shipping sunk by U-boat attack was lost in the outer fringe of the area which lay between 400 and 600 miles from the air bases in the United Kingdom and **Iceland**. It was clear that, in the inner area, air patrols had saved a number of convoys from even being sighted. They had kept the U-boats under and also given timely warning of their presence. Admiral Doenitz now complained that '... aircraft were locating and attacking the U-boat dispositions so that their patrols were located and avoided by convoys.' But as the U-boats moved farther out into the **Atlantic**, the aircrews flying from western **Scotland** and Northern Ireland found their patrols becoming extremely monotonous and devoid of incident; moreover, with the onset of the northern winter, they frequently had to fly in vile weather. It was a dull, dreary and unrewarding task —hour after hour in the air, a continuous greyness below and weight of cloud and rainstorms sweeping over the sea, with always the oppressive roar of engines and the whistle of a bitter wind through crevices in the hull. To keep an unblinking and vigilant lookout under such conditions demanded physical and mental endurance of a high order.

On occasions, however, unusual incidents did occur. Towards the end of August two New Zealanders, Flight Lieutenant Grocott, ¹ and Sergeant Millar, ² had what proved to be a unique and amazing experience. These men were members of a Whitley squadron based in the north-east of **Scotland**, with which a small group of New Zealanders was

then flying. On 26 August Millar was flying as navigator and Grocott as rear gunner on an **Atlantic** patrol when, 300 miles west of **Scotland**, engine failure forced their machine to come down on the sea. No one was injured in the landing and the crew managed to scramble into two aircraft dinghies. But the emergency rations were forgotten in the rush to abandon the sinking aircraft, so Millar swam back and secured these before the Whitley disappeared. Eight hours later, just as hopes of rescue were fading with the approach of darkness and a rising sea, the crew sighted what appeared to be a small vessel and fired a Very light. They

¹ Flight Lieutenant J. Grocott; born Nantwich, Cheshire, 20 Apr 1900; joined **RAF** Dec 1939; transferred **RNZAF** Jan 1944; p.w. 26 Aug 1941.

² Warrant Officer P. H. Millar; **Masterton**; born Crieff, Perthshire, 7 Jan 1911 shepherd; joined **RNZAF** May 1940; p.w. 26 Aug 1941.

were somewhat dismayed when the vessel turned out to be a German submarine. They were picked up, interrogated by the U-boat captain and sent below. They remained on board for the next fortnight, confined most of the time in the forward torpedo room.

‘No ships were sighted during the U-boat patrol or on the return journey to St. Nazaire,’ writes Millar, ‘but there were several crash-dives on account of aircraft. We had little rest because of the cramped conditions but considering the fact that we must have been a considerable nuisance to them, our treatment was very good. We lived in the forward compartment next to the bow torpedo-tubes. Two of us had hammocks slung in the engine-room but I usually slept hugging a torpedo tube. Occasionally we were allowed up in the conning tower at night for a smoke—one at a time.’

In spite of their subsequent discomforts these men, rescued by

chance from the **Atlantic**, were among the fortunate few, since with aircraft operating over such wide spaces of sea it was only on rare occasions that crews were picked up after their machines had come down. Later, when the air-sea rescue organisation was more fully developed, rescues became more frequent.

With the forcing of his U-boats away from the British coasts, which began in April 1941, the enemy began to look for weak spots in the defence of Allied merchant shipping. At that time they were not difficult to find. Off Freetown a group of six U-boats sank no fewer than 32 ships during the next month. But steps to meet this threat were already being taken by providing air bases in this area, and three New Zealanders who had been flying Sunderlands over the Western Approaches from the early days of the war took a prominent part in the establishment of the first base for anti-submarine aircraft in **West Africa**. Flight Lieutenant T. P. Gibson was in charge of the ground and maintenance party which sailed from the **United Kingdom** in February 1941. Then, early in the following month when the first three Sunderlands left to fly to **Freetown**, one was piloted by Flight Lieutenant Evison and another by Flying Officer Baggott. Their initial attempt was not without incident. On the first stage of the flight from **Plymouth** to Gibraltar, Baggott had an engine failure off Cape Finisterre but managed to reach Gibraltar safely. Evison was forced down in Portugal owing to shortage of petrol and he and his crew were interned. However, they managed to escape and returned to England by way of Gibraltar to collect another aircraft. Meanwhile the third Sunderland had been damaged at Gibraltar in a gale and had to return to England for repairs. Eventually three aircraft reached **Freetown** separately towards the end of the month. Operations were begun immediately to protect convoys in that area and a number of successful searches were flown for survivors from torpedoed ships. A typical report of one of the latter missions reads:

6th April, 1941. Sunderland, Captain—Flight Lieutenant T. P. Gibson; airborne **Freetown** 0545 hours to carry out anti-submarine search. 0712 hours sighted large oil patch and began square search. 0740 hours

sighted three lifeboats carrying approximately sixty men. 0827 found and informed M.V. *Foremost* of position of lifeboats. 0835 back to lifeboats to inform them of ship's approach. Then patrolled between ship and lifeboats. 1350 hours M.V. *Foremost* picked up survivors. 1555 hours landed **Freetown**.

The patrols were continued in spite of maintenance difficulties and the vagaries of a tropical climate. Forty-four inches of rain fell in September while many of the men were still accommodated in tents. Supplies were delayed through ships being sunk, but substitutes were found locally for many things. For example, it was discovered that groundnut oil worked splendidly in the hydraulics; oil pipeline joints were packed with sheets of brown paper, and serviceable oil filters were made from thin paper. A motor boat to act as tender to the flying boats was contrived by removing the engine from a discarded lorry and fitting it to a large dinghy.

By the end of the year more New Zealanders had reached West **Africa** with No. 204 Squadron from **Iceland** and No. 200 Squadron from the **United Kingdom**. With these additional squadrons established in new bases along the coast, the gap in the air patrols over the convoy route between Gibraltar and the Cape was reduced and sinkings diminished. But continued air patrols were necessary to prevent their recurrence, although this routine defensive work, in an area far removed from the main centres of the war, was to prove irksome and monotonous. It was in this region that No. 490 New Zealand Squadron was later to give valuable assistance in convoy protection.

Meanwhile, in the **North Atlantic**, British counter measures were proving successful. Stronger surface escorts and more frequent air patrols had removed the threat to the North-Western Approaches, so that shipping moved more freely to and from the Mersey and the Clyde. Co-operation between aircraft and escort ships in protecting convoys was steadily improving as the development of radio-telephony made inter-communication easier and quicker. The Senior Naval Officer of a convoy could now direct his attendant aircraft to distant search and the aircraft

were able to report results without having to return within visual signalling range. While shipping losses fell, the casualties suffered by the U-boats increased, 17 being destroyed in the **Atlantic** during the second half of 1941. By the end of that year the Germans mourned the loss of almost all their 'ace' captains of the earlier period. However, this success in clearing the British coasts marked but the first stage in the battle against the U-boats. The German strength was now sufficient to allow penetration into the South Atlantic where ships were torpedoed off the coast of **Brazil** and off St. Helena. U-boats had also started to enter the **Mediterranean**; during November 1941 the battleship *Barham* was sunk off the Libyan coast with heavy loss of life and the famous aircraft carrier *Ark Royal* torpedoed near Gibraltar. With the entry of the **United States** into the war after the Japanese attack upon **Pearl Harbour** on 7 December 1941, the Germans prepared for the U-boat campaign in American waters that was to be the main feature of the war at sea during the early months of the following year.

* * * * *

A further aspect of the war at sea in which New Zealand airmen took part during 1941 was the assault on German shipping along the extensive coastline between north **Norway** and the Franco– Spanish frontier. In the early stages the **Bay of Biscay** area was relatively unimportant commercially, although it later assumed prominence as the European terminal and departure point for some rare and valuable cargoes urgently needed by **Germany** and **Italy**. In the North Sea, however, it was different. Ores, particularly iron ore from north **Norway** and Swedish ores shipped through Narvik, passed down the Norwegian coast, through the Skaggerak and Kattegat to the **Kiel Canal**; part of the Swedish ores from Baltic ports also went through the canal, to be delivered at **Rotterdam** and **Emden**. In the reverse direction cargoes of coal and coke were carried to Norwegian and Baltic ports, while important military supplies also flowed northward along the Norwegian coast, all under the protection of the **Luftwaffe**.

Three methods of attacking this traffic—by mine, bomb and torpedo—were now being developed by the **Royal Air Force**, but for some time the mines laid from the air produced the best results. By the end of 1941 the Germans had, according to Lloyds' and their own records, lost 142 ships totalling 136,870 tons in areas where mines had been laid by aircraft. Others had been damaged and the Germans forced to divert an increasing amount of their war effort to counter measures such as minesweeping, and to the building of ships and their repair.

Minelaying from the air had begun in April 1940 at the time of the Norwegian campaign, and had been continued mainly as an anti-invasion measure. Only towards the end of that year was a serious effort made to interfere with the enemy's sea communications along the Dutch and German coasts. New Zealanders serving with both the Hampden squadrons of Bomber Command and the Beauforts of **Coastal Command** took part in these early mining operations. No. 42 Beaufort Squadron was commanded for the greater part of 1941 by Wing Commander Faville, ¹ who had been appointed to a permanent commission in the **RAF** nine years earlier, had specialised in engineering, and had joined **Coastal Command** in 1937. The mines sown from the air were of the magnetic type, designed to lie on the sea floor—an innovation in warfare as all mines previously used had been buoyant and were moored at fixed depths below the surface. The magnetic mine, which weighed about 1500 pounds, was dropped from the aircraft by parachute to avoid injuring the delicate mechanism on impact with the sea. It was set off by any violent change in the surrounding magnetic field such as would be caused by the passage of a ship above it. Various plant and vegetable code-names were given to the areas where the mines were laid so that, not unnaturally, the operations themselves were referred to as 'gardening'.

Normally the actual laying of mines in enemy waters was an uneventful task, but it nevertheless called for considerable skill on the part of the aircrew, accuracy in navigation being essential if the operation was to succeed. The aircraft usually set out just as dusk was

falling, flying at between 1500 feet and 2000 feet, and during the outward flight the navigator would frequently get 'fixes' from his wireless operator to check his position and course. Then as the aircraft approached the 'garden' where the mines were to be 'planted'—a shipping channel or the entrance to a port—height would be lost in order to pinpoint the exact position. This was done by choosing some prominent landmark, a small island or a lighthouse. The navigator would then sight the chosen landmark through his bomb-sight; at the moment the aircraft passed over it, he would press a stop-watch, at the same time telling his pilot to fly a given course at a constant speed and height. At the end of the period calculated by the navigator as necessary to reach the correct position, the mine would be released. Occasionally enemy fighters would intercept the minelaying aircraft or there would be searchlights and bursts of anti-aircraft fire from the shore. Another element of danger was the fact that, as the mines had to be dropped from a low level, aircraft ran the risk of crashing into the sea. The usual altimeter at this stage of the war was set for the barometric

¹ Group Captain R. Faville, CBE; **RAF**; born **Christchurch**, 5 Aug 1908; permanent commission **RAF** 1932; commanded No. 42 Sqdn, 1940–41; **Coastal Command** Development Unit, 1941–42; Group Captain, Operations, HQ **Coastal Command**, 1944–45.

pressure at base, so that even a slight change of atmospheric conditions could cause it to register height incorrectly in the area where the mines were laid.

Nor did the crews of the minelaying aircraft have the satisfaction of seeing the results of their work. There was no target area in which bomb bursts, fires or explosions could be observed. There was the splash of the mine as it entered the water and that was all. Yet the results achieved from this form of attack during 1941 continued to be greater than those obtained by the more spectacular weapons—the bomb and the torpedo.

These more direct methods of attack were developed slowly, and it

was not until the spring of 1941 that a real offensive with bomb and torpedo was begun against shipping at sea along the enemy-occupied coast of **Europe**. Previously a considerable part of the effort of the **Coastal Command** squadrons in eastern England had been devoted to anti-invasion patrols and the bombing of 'fringe targets'—aerodromes, railway yards, military depots, and ports along the whole length of the German-controlled coast from **Norway** to the Spanish frontier. Any bombing attacks on ships had usually been made by single aircraft engaged on reconnaissance. But now the Blenheims and Hudsons began to fly in small formations of two or three, sometimes more, each formation being allocated a particular 'beat' off the enemy coast. Furthermore, really low-level attacks became the rule, with aircraft making the best use of cloud cover and evasive action during their swift approach and departure.

Just over eighty New Zealand airmen took part in these operations during 1941 as pilots, navigators, wireless operators or gunners. Two-thirds of them flew with the **Blenheim** squadrons of No. 2 Group, Bomber Command, which began shipping attacks in March, the remainder with the Hudson and **Blenheim** squadrons of Coastal Command based in the eastern and southern districts of **Britain**. On patrol the aircraft flew low over the sea and, as soon as enemy ships were sighted, each pilot picked a target and delivered an attack from mast height. He would fly directly at the ship and, just before a collision seemed imminent, would ease back the control column to lift the aircraft over the vessel, the bombs being released in a closely spaced stick. If these were well aimed, the sides or deck of the ship would be penetrated and a bomb would explode inside, sometimes setting the ship on fire. Then the aircraft skidded round, weaving as much as possible to avoid anti-aircraft fire, and made for home. As they flew low over the ships, there was the ever-present danger that they would strike the masts of a vessel. This happened on several occasions when pilots misjudged their height. Delayed action bombs ¹ were used in these attacks, and much experimental work had been necessary to determine the amount of delay required so that the attacking aircraft would not be damaged or destroyed by the explosion of

their own bombs.

Crews attacking shipping in the vicinity of the enemy-occupied coasts also had to face the constant threat of interception by enemy fighters. Early in January Pilot Officer Sise, ² of No. 254 Squadron **Coastal Command**, on a reconnaissance patrol near Bergen, sighted a merchant vessel. While making an attack he was set upon by a Messerschmitt 109 but fortunately, after a brief exchange of fire, his **Blenheim** was able to escape into cloud. Sise's report of the encounter ends: 'No damage. Patrol completed.' More often though it was the flak from the ships and their escorts which caused aircraft to come to grief, and on many occasions it was only by the exercise of great skill that pilots brought badly damaged aircraft safely back across the North Sea. On 14 February 1941 Pilot Officer Poynter, ³ flying a **Coastal Command Blenheim**, attacked a tanker off the south-west coast of **Norway**. Afterwards the ship was seen to be on fire with oil burning on the water. But during the attack anti-aircraft fire tore holes in the port wing and fuselage and put elevator control and the undercarriage out of action. It was only by fine airmanship that Poynter got the **Blenheim** back to England to make a landing without injury to his crew. On return from patrol early in April Pilot Officer Brice, ⁴ captain of a Beaufort of No. 86 Squadron, was not so fortunate. His aircraft crashed on landing and burst into flames. He found the top hatch jammed and was badly burned before he was able to force it open and jump clear. Then he discovered that his rear gunner was still trapped in the burning machine. By this time the wind was blowing flames over the rear hatch, but Brice climbed back on the fuselage and by jumping on the hatch eventually succeeded in forcing it open. He got his gunner clear but suffered serious burns to his hands and face in doing so. His courage was recognised by the award of the George Medal.

The **Blenheims** of No. 2 Group had now begun a series of daylight attacks on enemy shipping. In command of No. 82

¹ The **Blenheim** usually carried four 250-pound or two 500-

pound bombs together with four 25-pound incendiaries.

² Wing Commander G. D. Sise, DSO and bar, DFC and bar; RAF; born Dunedin, 21 Jan 1917; joined RNZAF Oct 1939; Wing Commander, anti-shipping tactics, Coastal Command, 1943–44; commanded No. 248 Sqdn, 1944–45; RAF Station, Mount Farm, 1945; transferred RAF Aug 1947.

³ Flight Lieutenant D. M. Poynter; born Dannevirke, 23 Nov 1915; accountant; joined RNZAF Oct 1939; killed in flying accident, 24 Dec 1941.

⁴ Squadron Leader J. C. Brice, GM; Wellington; born Wellington, 3 Jun 1919; joined RAF Jan 1940; transferred RNZAF Jul 1943.

Squadron in this group was Wing Commander Elworthy, ¹ who by March 1941 had completed 34 missions with Bomber Command and, ‘by his personal leadership had brought his squadron to the highest pitch of war efficiency’. On 31 March he led a formation of six aircraft to attack shipping off Le Havre. Two tankers, escorted by flak ships, were sighted and the Blenheims prepared to bomb. Elworthy went for one of the tankers, scored a direct hit and set the vessel on fire. The second tanker was also hit by bombs from another aircraft and left burning. Although considerable flak was thrown up by the escort vessels, the Blenheims escaped with only slight damage. On the same day Sergeant Overheu, ² flying with No. 21 Blenheim Squadron, scored a direct hit on one of two destroyers escorting a convoy off the Frisian Islands. A fortnight later, when his squadron intercepted another convoy in this area and claimed hits on two merchantmen and one of the escorts, Overheu was responsible for the damage to one of the larger ships. During this attack two of the six aircraft taking part were shot down, but Overheu survived. Three months later his aircraft hit the mast of the vessel he was attacking and crashed into the sea.

Usually these daylight attacks in areas close to the enemy coast

were arranged for times and in weather conditions when the German fighter patrols could be avoided. But sometimes the Blenheims were unlucky. On one occasion three of these aircraft were detailed to attack a large tanker which, accompanied by nine escorts, had been sighted in the Channel off the Belgian coast. One of the bombers was flown by Pilot Officer Cooper.³ It was his sixth operational mission. The bombers found and attacked the tanker, but on the homeward flight they were intercepted by Messerschmitts and two Blenheims, including that piloted by Cooper, were shot down. The third, although badly battered, got back with two of its crew wounded, one of them fatally.

But the anti-aircraft fire from the ships continued to be the main cause of casualties, and as the enemy progressively increased the number of escorts and armed the merchant ships themselves, the losses in aircraft making attacks rose steeply. On many occasions crews reported that opposition from flak was severe, and such violent evasive action was necessary during the approach that

¹ Air Commodore S. C. Elworthy, CBE, DSO, DFC, AFC; **RAF**; born **Timaru**, 23 Mar 1911; permanent commission **RAF** 1936; commanded No. 82 Sqdn, 1940–41; Operations Staff, No. 2 Bomber Group, 1941; Group Captain, Operations, HQ Bomber Command, 1942–43; commanded **RAF** Station, Waddington, 1943–44; Air Staff, HQ Bomber Command, 1944; **SASO**, No. 5 Bomber Group, 1944–45.

² Sergeant I. Overheu, DFM; born Geraldton, **Western Australia**, 28 Jul 1917; commercial traveller; joined **RNZAF** Mar 1940; killed on air operations, 16 Jun 1941.

³ Pilot Officer T. E. Cooper; born **Hamilton**, 3 Mar 1916; clerk; joined **RNZAF** Oct 1939; killed on air operations, 18 Sep 1941.

bombs either fell short or overshot. Frequently aircraft had literally to weave in and out among the vessels of the convoy and its escort in

order to find a gap through which they could make good their escape. Altogether these low-level attacks were extremely hazardous and demanded great courage and determination on the part of the aircrews. Even when attacking at mast height it was no easy matter to score a direct hit. Yet near misses were ineffective since, with the depth of water in which enemy shipping was found near the North Sea coasts, the bombs which missed ships would explode on the bottom, but at too great a depth to do any harm as the explosive charge was comparatively small and would not produce anything approaching a depth-charge effect. Nevertheless, Lloyds' and German records reveal that the British crews succeeded in sinking 53 ships amounting to 75,260 tons during 1941, with a further 29 vessels, totalling 102,280 tons, damaged.

On 20 September 1941 Flight Lieutenant Wheeler ¹ and Pilot Officers Allport ² and Edmunds ³ took a prominent part in a midday attack by three squadrons on a convoy of 14 vessels off the Dutch coast. Many of the ships were flying balloons and they were also protected by anti-aircraft vessels. Despite these balloons and the heavy flak, the Blenheims went in low, with front guns blazing, and rose to little more than mast height to bomb. The formation of six aircraft with which Allport and Edmunds were flying reported direct hits on a tanker and a cargo ship, with a probable hit on one of the escorts. However, the Blenheims met considerable anti-aircraft fire. One caught fire and crashed into the sea while two others, including that flown by Allport, were badly damaged and barely managed to get back to base. Wheeler had a narrow escape while leading another section of bombers in the same action. He attacked 'a big fat one of about 5000 tons which was flying a balloon', and afterwards reported:

As we went over the ship I had to list my starboard wing sharply to miss the balloon cable and then propelled down between two flak ships. The **Blenheim** was hit in the starboard engine. The aircraft shuddered and in counteracting the sudden lurch we hit the sea with our port airscrew. Had just managed to pull out when the starboard engine knocked and rattled so badly that I had to throttle down. We hit the sea a second

time and I thought we were finished. Again I gave the aircraft all the boost I could and once more we pulled up.

¹ Wing Commander A. B. Wheeler, DFC; born Feilding, 11 Feb 1916; farmer; joined RCAF Oct 1940; commanded No. 88 Sqdn, 1944; killed on air operations, 15 Feb 1944.

² Squadron Leader V. Allport, DFC; born **Nelson**, 18 Feb 1916; insurance agent; joined **RNZAF** Aug 1940; killed in flying accident, 26 Mar 1944.

³ Flight Lieutenant E. G. Edmunds, DFC; born **Wellington**, 29 Nov 1915; sports goods maker; joined **RNZAF** Sep 1940; killed on air operations, 11 Dec 1941.

The crew had many anxious moments during the return flight but, after 'what seemed an eternity', succeeded in reaching base. When the **Blenheim** touched down it was found that the oil pipes had been damaged and there was scarcely any oil left in the tank. Wheeler's squadron lost two of the six aircraft engaged in this attack: one **Blenheim** was hit by flak as it approached the convoy and made a belly landing on the sea; the other was blown up by the bombs of a preceding aircraft as it attacked one of the ships. All three pilots, after winning the Distinguished Flying Cross, lost their lives in subsequent operations, Edmunds whilst attacking shipping from **Malta** in December 1941, Wheeler whilst flying with Bomber Command early in 1944—he had by then risen to command a squadron—and Allport whilst instructing at a flying training unit about the same time.

In the face of the mounting losses and a serious shortage of **Blenheim** aircraft, the squadrons of No. 2 Group, Bomber Command, were withdrawn from attacks on shipping in the North Sea at the end of October 1941. Some of these units were immediately transferred to **Malta**, where they continued to score successes against shipping plying between **Sicily** and North African ports. A limited offensive was

continued in the North Sea and along the Norwegian coast mainly by aircraft of **Coastal Command**. On the night of 3 November a notable success was scored by a single Hampden of No. 144 Squadron on offensive reconnaissance along the Frisian Islands. During a break in the snow and rain squalls which swept across the North Sea, the captain, Pilot Officer Craig, ¹ sighted a convoy of ten ships. Selecting the largest target, a vessel of some 10,000 tons, he flew in at low level, made an accurate attack and set the ship on fire. It was learnt later that the German general commanding the western anti-aircraft defences was on board this ship and was among those killed as a result of the Hampden's attack.

Among other units that continued anti-shipping patrols was No. 404 Blenheim Squadron in which Squadron Leader McHardy, who had flown Blenheims from the early days of the war, was flight commander. At the beginning of October McHardy took a detachment from his squadron to Sumburgh, in the Shetlands, from which base patrols were flown along the Norwegian coast. Convoys bound for **Iceland** were also escorted and protection given to minesweepers operating in the vicinity of the British coast. Towards the end of December, when **Coastal Command** was called upon to

¹ Flight Lieutenant J. F. Craig, DFC; born **Petone**, 11 Dec 1912; clerk; joined **RNZAF** Jul 1940; killed on air operations, 15 Mar 1944.

take part in the second of what were known as 'Combined Operations' ¹—a commando raid on the Norwegian port of Vaagso— McHardy was nominated as **RAF** representative and fighter controller aboard HMS *Kenya*. The object of the raid was to destroy targets in the town of South Vaagso and on the nearby island of Maaloy, and to sink any shipping found in Ulvesund, the strip of water which divides the island of Vaagso from the mainland, and which was a focal point for shipping proceeding along the sheltered channel provided by the almost continuous chain of islands along the Norwegian coast. The task of

Coastal Command in the operation was to provide close fighter protection in the combat area and escort the forces to and from the scene of the raid. The day before the attack, a blizzard struck the airfields in northern **Scotland** from which the aircraft were to operate, and when the crews came to man them they found four inches of hard-frozen snow on the wings. They chipped it off with spades as best they could, but many of the aircraft took off with their wings still snow-laden.

The assault ships and their escort of naval craft reached Vaagso just before dawn on 27 December and the landings began at first light.

‘All was quiet,’ writes McHardy, ‘and the first sign of activity was the arrival of a force of Hampdens which laid a smoke screen in front of the German coastal batteries. The landing craft were lowered and the Commandos streamed ashore under cover of a barrage from the warships. An isolated battery at the top of the fiord started firing as the smoke cleared and shells landed all around us. The *Kenya* was hit twice but the battery was then knocked out by her guns. Air cover was provided throughout the day by my own squadron and by other **Coastal Command** Blenheims and Beaufighters which made many attacks on German bombers and fighters. Two Blenheims from No. 404 Squadron claimed one probable and a possible after “an excellent scrap” inside the fiord. Several more enemy machines were shot down during the day with few losses on our part. From the bridge of the *Kenya* I was able to help our pilots by directing them on to German planes through radio-telephone—we could see the enemy machines

¹ Combined operations were raids on enemy coastal targets in which the services co-operated, the extent of the contribution by air, sea and land units being determined by the nature of the task. The first large-scale raid was made by **Royal Navy** and **Commando** units on 4 March 1941, against the Lofoten Islands. The herring and cod oil factories, which had been supplying the Germans with a badly needed product, were destroyed. In addition, over 200 prisoners were taken, including some

Norwegian collaborators, and more than 300 volunteers for the Norwegian forces returned with the expedition. On the night of 27 February 1942 a successful raid was made against the German radio-location post at Bruneval, a small village some twelve miles north-north-east of Le Havre. On this occasion the assault force was composed of airborne troops, supported by naval units and a detachment of troops to cover their withdrawal. A month later the German naval base at St. Nazaire was attacked. This port possessed the only dry dock on the **Atlantic** seaboard capable of holding the *Tirpitz*. HMS *Campbeltown* rammed the lock gates and was then scuttled. The next morning five tons of explosives on board detonated, killing some 400 Germans. The dry dock was destroyed together with the pump house and winding gear. Damage was also inflicted on the port and on shipping. The largest of the combined operations in **Europe** was against Dieppe on 19 August 1942.

approaching from far off in the clear air. Five bombing attacks on our ships were made during the day but not one was hit. The Commandos carried out a highly successful attack, killing or capturing the entire German garrison without suffering heavy casualties. The British destroyers also played havoc with the German ships. After leaving Vaagso we received a final bombing attack in moonlight but were lucky once again. On arrival at Scapa I was flown off the *Kenya* in a Walrus and returned to Sumburgh where my first job was to fly a reconnaissance of Vaagso. The success of the operation was confirmed.'

The torpedo attacks made on merchant shipping during 1941 were few as only two squadrons of **Coastal Command** were available for this form of attack. Furthermore, apart from an acute shortage of torpedoes at this period, these same squadrons had to be prepared for diversion at short notice to search for and attack German naval units at sea. The torpedo itself was an awkward weapon when carried by aircraft and launched from the air, but very effective if it hit the target since it exploded beneath the surface. The resulting damage was almost always more severe than that caused by a bomb. The torpedo was an awkward weapon for a number of reasons. It was brittle and if dropped from too great a height, or when the aircraft was travelling too fast, would break

up on striking the sea. It was also a difficult weapon to aim, since it was essential that a torpedo entered the water at the correct angle. If badly aimed it would either dive deeply and explode or else might move up and down like a porpoise and be diverted from its target. It could not be aimed too near the target or it would pass underneath. At this stage of the war, when experience and training facilities were lacking, it is not surprising that a large number of the attacks were abortive. ¹

One of the few successful torpedo attacks against merchant shipping during 1941 was made by Flying Officer Dinsdale ² one night early in August. He was flying on patrol along the south-west coast of **Norway** when he sighted a merchant ship in the moon path and had the satisfaction of seeing his torpedo strike the

¹ One squadron commander has commented: 'We had much to learn about the requirements for anti-shipping operations. At first when the Service was equipped with biplanes we were able to profit by the **Royal Navy's** experience and adopt similar tactics. But soon after the war began the Vildebeeste was replaced by the Beaufort, and this machine was unfortunately pressed into service before the "bugs" had been removed from the airframe or the engine and before new tactics were evolved—with the faster aircraft there were limitations in dropping speed of torpedoes. The defensive armament of the Beaufort was weak and the inter-communication by W/T was far too slow. These difficulties were not appreciated by those responsible for operations and too much was expected of the aircrew. There was no set operational tour and crews were kept on the job until they were lost or until squadron commanders could force them off on a rest—all too frequently not a rest but the unremitting grind of instructional work at an overcrowded operational training unit.'

² Wing Commander J. S. Dinsdale, DSO, DFC; **Auckland**; born **Christchurch**, 24 Apr 1913; joined **RAF** Aug 1938; transferred **RNZAF** Jan 1944; commanded No. 489 (NZ) Sqdn, 1943–44; No. 155 (GR) Wing, **Coastal Command**, 1944.

vessel amidships. There was a violent explosion followed by a dull

red glow. Dinsdale later reported:

We took off from a base in the Shetlands just before dusk, our departure being timed to catch the moon rising over the Norwegian coast. We were part of a small flight engaged on rover patrols, but the formation split up during the passage across the North Sea, some returning because of engine trouble. About twenty minutes after reaching our patrol area we sighted what appeared to be two vessels—one large and one small. But before we could attack the moon was obscured and we ran into a heavy rain squall. When we next sighted the ships we found ourselves between the moon and our target so were forced to fly out of range and manoeuvre into a more advantageous position. In endeavouring to do so we lost the ships in the rain squall and had to stand off until they emerged from the darkness. Then we attacked and saw our torpedo strike home. Our exuberance was, however, short-lived as a few moments later we were attacked by two German aircraft in bright moonlight. But they did not press home their advantage and eventually we lost them in cloud.

Dinsdale had been with the **Royal Air Force** since 1938, and had flown with No. 42 Squadron from the outbreak of war. Among his early exploits had been a successful attack on a Nazi headquarters at Finse, **Norway**, in December 1940. He was later to command the New Zealand torpedo-bomber squadron.

On a number of occasions during the second year of the war aircraft of **Coastal Command** were called upon to search for German warships at sea and to attack them with bomb and torpedo. During the winter of 1940 the aircraft flying from bases in the north of **Scotland** to watch the gap between **Norway** and the Shetlands had an almost impossible task. The long hours of darkness, and fighter protection from bases in **Norway**, made it easy for German commerce raiders to elude the reconnaissance patrols and escape into the **Atlantic** unobserved. The pocket battleship *Admiral Scheer* broke out early in November 1940 and operated in the **Atlantic** and the **Indian Ocean** for the next five months. She sank 19 ships. The heavy cruiser *Hipper* entered the **Atlantic** in

December and was followed by the battle-cruisers *Scharnhorst* and *Gneisenau* in January 1941. By the end of March the latter two raiders had accounted for 27 ships. They then put into **Brest**, from which base further operations against British Atlantic shipping were intended. But the German plans were frustrated by Royal Air Force reconnaissance patrols and bombing raids,¹ which confined these two ships and the heavy cruiser *Prinz Eugen* (which joined them in May) to port until February 1942, when they abandoned the idea of operating from **Brest** and returned to **Germany** in a spectacular dash up Channel.

¹ These raids, in which a number of New Zealanders took part, are described in the next chapter.

New Zealanders in **Coastal Command** took part in the frequent searches flown to intercept these raiders on their outward and inward voyages. There was particular activity by reconnaissance aircraft towards the end of May 1941, when it was discovered that the new German battleship *Bismarck* in company with the *Prinz Eugen* had sailed from Bergen in **Norway**. On 24 May these ships were brought to action by naval forces in the Denmark Strait, between **Iceland** and Greenland, when HMS *Hood* was blown up and sunk and the *Bismarck* damaged. Flight Lieutenant Vaughan,¹ flying with No. 201 Squadron from **Iceland**, was captain of the *Sunderland* which had sighted and shadowed the *Bismarck* in the Denmark Strait that day. The crew of the flying boat witnessed the action between the *Bismarck* and HM ships *Prince of Wales* and *Hood*, during which the bearing and distance of the enemy were frequently signalled visually to the British ships. Later, Vaughan was to signal the position of survivors from the *Hood* and the fact that the *Bismarck* was leaving a large trail of fuel oil, indicating that damage had been inflicted on her. Altogether the *Sunderland* was on patrol for 14 hours.² On 5 June Vaughan flew a long and difficult reconnaissance of the Norwegian coast, including Narvik Fiord, searching for German naval units. This mission involved a flight of 14 hours from a base in the Shetlands. Vaughan, who had been with No.

201 Squadron at the outbreak of war, lost his life six months later when his aircraft crashed into the Irish Sea owing to engine failure.

During the second week of June 1941, many patrols were flown from Scotland in an effort to locate the pocket battleship *Lutzow*, which was known to have left the Baltic en route to Trondheim. New Zealanders took part in these searches and in providing anti-submarine escort to units of the Home Fleet which sailed from Scapa Flow on the night of the 11th in an attempt to intercept the enemy warship. Early on 13 June a torpedo strike force of 14 Beauforts was despatched in two sections to patrol in the vicinity of Lister Light. One of these sections was led by Wing Commander Faville, and it was an English pilot from his section, Flight Sergeant

¹ Flight Lieutenant R. J. Vaughan, DFC; born Wairoa, 16 Jun 1914; joined RAF Oct 1938; killed in aircraft accident, 5 Dec 1941.

² The subsequent events in connection with the *Bismarck* are of interest. Following the action with the *Hood* and *Prince of Wales*, the German ships were shadowed to the southward until the early hours of the following day, when they were lost in thick weather. Nothing was known of their movements for the next 30 hours. Then, on the morning of the 26th, a Catalina of Coastal Command, flying from a base in Northern Ireland, located the *Bismarck* in the Atlantic on course for Brest. The net closed in and, after torpedo attacks by naval aircraft and destroyers, the *Bismarck* was finally sunk by battleships and cruisers on 27 May. The *Prinz Eugen*, which had not been sighted, succeeded in reaching Brest.

Loveitt, ¹ who found and torpedoed the battleship. This was after the formation had become split up in low cloud and rain squalls. The *Lutzow* turned back and was discovered by reconnaissance a few days later in dry dock at Kiel.

Altogether, throughout 1941, the threat contained in the presence of

major German naval units in European waters not only absorbed a considerable portion of the air effort available for the war at sea, but it also severely hampered the development of the bombing offensive against **Germany**.

¹ Flight Lieutenant R. H. Loveitt, DFM; born Coventry, Warwickshire, 7 Feb 1919; joined **RAF** Sep 1939.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 8 – EARLY BOMBER OFFENSIVE

CHAPTER 8

Early Bomber Offensive

DURING the first year of war the pressure of events had kept the British bomber squadrons employed mainly in a defensive role. The campaigns in **Norway** and **France**, followed by the German air attacks on Great Britain and the threat of invasion, had diverted the bomber force from its intended task of attacking German productive capacity. But with the defeat of the daylight raids on the **British Isles** during the summer of 1940, and the consequent decline of the risk of seaborne attack, attention had turned to the possibilities of reprisals and of eventually bringing about the enemy's collapse by bombing. Royal Air Force Bomber Command, however, was still in the early stages of expansion, and casualties in the early campaigns had been heavy. Consequently during the months following the Battle of **Britain** many of the men arriving in England under the Empire Training Scheme found themselves posted to the operational training units and then to the squadrons of Bomber Command. Of the New Zealanders who reached **Britain** during the second year of war over half eventually went to bomber squadrons. Most of them were pilots, and it was partly because of this that New Zealand airmen became so scattered among the squadrons of Bomber Command. In fact, by June 1941, although there was some concentration in No. 3 Wellington Group, there were very few units in which the Dominion was not represented. Among the new arrivals there was also a proportion of navigators, wireless operators and air gunners, together with a few men trained in the Dominion for various ground duties.

They found several of their fellow countrymen in positions of leadership in Bomber Command during 1941. Air Vice-Marshal Coningham continued in command of No. 4 Group until July, when he went to the **Middle East** to take charge of the **Tactical Air Force** in the **Western Desert**. He was succeeded by Air Vice-Marshal Carr, who was to remain as Air Officer Commanding No. 4 Group for the greater part of the war. Group Captain McKee, who had led a Wellington Squadron

during the previous year was, after a period in charge of operational training in No. 3 Group, to command the bomber station at Marham, in Norfolk. In March 1941 Group Captain Buckley, 'the father of No. 75 Squadron', became station commander at Feltwell, from which base the squadron continued to operate under Wing Commander Kay. Kay had been with the unit from its formation in 1939 and had been responsible for the early navigational training. He had led No. 75's first mission over **Germany**, and subsequently won commendation for his part in a difficult bombing raid during the Battle of **France**.

Four other squadrons in Bomber Command were led by New Zealanders during 1941. Wing Commander G. T. Jarman, who commanded first a Whitley and then a **Halifax** squadron in Coningham's group, had joined the **Royal Air Force** in 1930 and flown on operations during the early months of the war as a flight commander in No. 77 Squadron. In June 1940 he was appointed to command this squadron and, during the following months, 'by his steady example and fine leadership built up a very good unit from a squadron that had suffered severe casualties.' In 1941 he took command of one of the first squadrons to be equipped with the new four-engined **Halifax** aircraft and was to lead this unit in one of the most successful daylight attacks of the year against the German battle-cruiser *Scharnhorst*, just when this ship was about to break out into the **Atlantic**. In No. 2 Group, Wing Commander Elworthy was to lead a **Blenheim** squadron on daylight attacks against ports and shipping along the enemy-occupied coast. Elworthy had been appointed to a permanent commission in the **Royal Air Force** in 1936, and at the outbreak of war was flying with a **Blenheim** squadron. In April 1940 he was sent to instruct pilots at a bomber operational unit, where he did most valuable work at a time when trained pilots were urgently needed. He returned to an operational squadron as flight commander in August 1940, taking over the unit three months later. Later in 1941 he was appointed to the operational staff of No. 2 Group, Bomber Command.

Wing Commander Kippenberger, ¹ brother of Major-General Sir

Howard Kippenberger, the distinguished New Zealand soldier, was to command No. 142 Wellington Squadron during 1941. He had done valuable work as a flying instructor in the pre-war years, and then served with the air contingent in **France** and later on the operations staff at No. 1 Bomber Group Headquarters. Wing Commander Freeman, who was to win distinction in operations with Wellingtons of No. 3 Group in 1941, had made his way to England in 1933 at the age of 17 and had entered the **Royal Air Force**. He later qualified as a pilot and served with a fighter squadron

¹ **Group Captain R. L. Kippenberger**, CBE; born Prebbleton, **Canterbury**, 3 Dec 1907; joined **RAF** 1930; permanent commission 1936; commanded No. 142 Sqdn, 1941; **RAF Station, Feltwell**, 1942–43; **RAF Station, Swanton Morley**, 1943; **Group Captain, Operations, HQ No. 2 Bomber Group**, 1944; commanded No. 137 Wing, No. 2 Bomber Group, 1944–45.

before joining the New Zealand Wellington Flight in July 1939. He flew with No. 75 Squadron until the end of 1940, winning distinction for outstanding efficiency as a captain of bomber aircraft 'who was also a highly skilled and determined navigator, with an almost uncanny ability to find his target under the most difficult conditions. On one occasion he had made a special photographic reconnaissance of Stettin, using only astro-navigation, and had achieved complete success'. Freeman had made a special study of navigation and was one of the few service pilots to obtain the No. 1 Civil Navigator's Licence at this time. After organising navigational training at No. 3 Group Headquarters, during which time he flew on many operations with young crews, he went to a Wellington squadron as a flight commander early in 1941. Later he was appointed to command another Wellington squadron, which he subsequently led in a successful attack on Turin as well as on many raids against targets in **Germany**.

During this period New Zealanders also served as flight commanders with the bomber squadrons and as instructors in the operational training

units, while a small but significant number did valuable work in maintenance and administrative duties and in operational control. By September 1941, 220, nearly one quarter of the men from the Dominion who had served with Bomber Command since the outbreak of war, had lost their lives, while a further fifty had been made prisoners of war. Casualties in Bomber Command during the same period included 7180 aircrew killed or prisoners of war, and the loss of so many highly trained men, many of them with considerable experience in operations, was to have serious effects on the efficiency of the command at this stage of its expansion.

Throughout this second year of war the bomber organisation continued to develop on a basis of five operational groups, each controlling a cluster of stations and squadrons in eastern England. But the size and composition of the force as a whole changed only very slowly. Although the first few really 'heavy' bombers, the **Manchester**, the four-engined Stirlings, Halifaxes and the American Fortresses, were introduced at the end of 1940, technical difficulties repeatedly caused their withdrawal from operations. There were also serious delays in the production of sufficient numbers of these new types.¹ The result was that the great majority of the sorties

¹ In particular, the failure of the **Manchester** added to the delay in expansion of the bomber force. Four whole squadrons had to re-equip when this aircraft was taken off operations. In itself, the **Manchester** was a fine aeroplane, but the twin engines with which it was fitted failed to produce the necessary lifting power. However, this fault proved a blessing in disguise. The aircraft was rapidly redesigned, as an emergency measure, to take four engines. It was then renamed the Lancaster and turned out to be the finest and most efficient bomber of the war.

during 1941 were made by crews flying Wellingtons and obsolescent Whitleys, Hampdens and Blenheims. The Wellington, reliable but slow and ill-armed, was to be the mainstay of the British bomber force until well into the following year. Such were the difficulties and delays with

the new types that, during the latter half of 1941, all that was actually available for operations was, on an average, a force of 380 medium bombers consisting of some 200 Wellingtons, 120 Hampdens and 60 Whitleys, together with about 40 of the new 'heavies'. Furthermore, problems of maintenance on the airfields meant that it was rarely possible to despatch more than 150 aircraft on any one night. It was often considerably less. Another limiting factor was the shortage of trained crews, and in an effort to overcome this the experiment was tried of cutting down the time allotted to operational training. But squadrons only became diluted with men less fully trained and casualties increased, aggravating the wastage in front-line strength. Towards the end of the year losses became so serious that Bomber Command was forced to reduce the scale of its operations over **Germany**.

The general policy for the bomber offensive was formulated by the Chiefs of Staff on the basis of the reports and recommendations submitted to them. It was then approved by the **War Cabinet**, and their decisions were communicated through **Air Ministry** in directives to the Air Officer Commanding-in-Chief, Bomber Command, whose duty it was to implement them and, in consultation with his operational staff, to plan the actual bombing operations. At this stage of the war the chief difficulties involved in this planning were the wide variety of objectives the command was called upon to attack, the limited force available, and the scanty information regarding weather conditions over the Continent. Soon the increasing enemy defences had also to be taken into consideration.

Once the decision to attack a particular target had been made, orders were passed through the groups to the stations, where a pattern of events followed that was soon to become a well-established routine at bomber bases throughout eastern England. Aircraft were detailed and arrangements made for refuelling and 'bombing up'. Crews were warned and the operations staff began to work out details of the raid, preparing the maps and other material needed by the crews and the information required for briefing. An atmosphere of greater urgency and expectancy

enveloped the base as news of an impending operation inevitably spread. Then, a few hours before the aircraft were due to take off, crews would be assembled in the briefing room and given information regarding the target, the enemy defences, and the weather likely to be encountered during their flight. Details of bombing and signals procedure would follow. The degree of formality at these gatherings varied, but as alert minds worked in quiet concentration on the tasks to be carried out, there was ever present an undercurrent of grim purpose, of uncertainty and adventure, which produced that peculiar and highly sensitive atmosphere known only to those who have experienced it. But the tension usually relaxed as questions were asked and the captains and navigators began to work out the details of their mission. Meanwhile, the ground crews had been working hard to achieve maximum serviceability of the aircraft allotted for the operation. Last-minute snags were rectified and finally their work was done. Bombs had been hoisted, guns loaded and equipment tested. But particularly in these early days, things did not always run smoothly. The target would sometimes be changed, a different bomb load ordered, the whole operation postponed or even cancelled. However, if all went well the aircrews, after a meal and perhaps a short rest, would take over their machines, and the moment towards which all energies had been directed arrived. One by one the engines burst into life; the aircraft, picked out by their navigation lights, began to move in procession to the take-off point. The first one would turn slowly on to the runway, pause to clear its engines, and then, with a roar of propellers in fine pitch, move steadily down the line of lights. She gathered speed; suddenly her lights rose above the ground and she was airborne. The next one started to move and soon all were gone. They climbed towards the east and out over the North Sea.

Night attacks had now become the rule in the assault on [Germany](#). Bitter experience during the early months of the war had taught the necessity of relying on night bombing if losses were to be kept within reasonable bounds. Unescorted bombers had proved no match for the German day fighters and, as yet, the Royal Air Force had not machines

suitable for escort duties over **Germany** since the British aircraft industry had, of necessity, concentrated on the production of fast short-range fighters for home defence. But this resort to night operations had brought problems of navigation and identification, and soon recognition of the virtual hopelessness of precision bombing at night led to the introduction of 'area bombing', in which the force available on any one night was given as its objective an industrial town or district rather than a number of widely scattered targets of one or two special types. In October 1940 it was still believed that the destruction of Germany's synthetic oil plants and storage depots would have an immediate effect on her war potential; consequently, during the closing months of that year, New Zealanders flying with the Wellingtons, Hampdens, and Whitleys found the objectives detailed for attack mainly of this type. But they proved much more difficult targets to locate and identify by night, particularly in the weather prevailing over **Germany** at this season of the year, and while some of the more highly trained and skilled crews achieved individual successes in low-level attacks, the cumulative effect was negligible. In any case **Germany** had obtained large stocks of oil from her conquests in **Europe** and she also had access to Roumanian oil. At the same time the scale of the offensive against oil was limited by the fact that the bomber force was frequently diverted to attack naval and political targets—the German ports, **Berlin** and **Munich**. Some of these diversions, however, were productive of unusual results. One raid on **Berlin** appears to have interrupted a conference between the Russian and German foreign ministers which had to be continued in an air-raid shelter, while on 8 November 1940 fifty bombers reached **Munich** and upset a Nazi rally in the famous beer cellar where the party had its birth in 1923.

Apart from the raids on **Germany**, small forces were despatched to attack industries in Milan and Turin on six occasions during November and December. These were difficult targets since they involved a round flight of 1350 miles and a double crossing of the Alps. Many of the Whitleys despatched in the first attacks failed to surmount this formidable barrier, most of them being unable to gain sufficient height

because of the weight of ice which formed on wings and fuselage. On the night of 5 November conditions were particularly severe, and of the 19 Whitleys which set out from England only one, that captained by Pilot Officer Miller, ¹ succeeded in reaching **Italy**. He and his crew were fortunate to survive their hazardous flight. On the outward journey electrical storms put the wireless out of action. Then, over the Alps, thick clouds with snow and ice were met and the machine was buffeted by strong winds. Despite this the Whitley flew on and completed its mission alone. On the return journey fuel ran out while crossing the Channel, but Miller managed to bring his aircraft down on the sea near a small ship and all the crew were rescued. A similar experience befell Pilot Officer Bagnall, ² who captained another Whitley in a raid against **Italy** on the night of 23 November. On the return journey, owing to lack of fuel, the

¹ Wing Commander H. H. J. Miller, OBE, DFC, AFC; **Morrinsville**; born Eureka, **Auckland**, 31 Mar 1914; school teacher; joined **RAF** Sep 1939; transferred **RNZAF** Sep 1943; served with Bomber Command, 1940–42; No. 91 Group, 1943–44; CFI No. 24 OTU, 1944–45.

² Flight Lieutenant D. R. Bagnall, DFC; **Wellington**; born **Palmerston North**, 27 Oct 1910; joined **RAF** Sep 1939; transferred **RNZAF** Jan 1944.

machine was forced down in a rough sea off Dungeness. Bagnall was the only survivor. ¹

In such cases, where crews had shown dogged determination in reaching their targets, it was often the last lap which proved the most dangerous part of the mission. Crews would be tired, the aircraft possibly damaged, fuel running low and the weather at the home airfield uncertain. One night early in February 1941, 17 of almost a hundred bombers despatched crashed on return to England when fog developed over airfields earlier than had been expected. There were to be other

nights during the year when more aircraft and crews were lost through crashing on their return than during the flight over **Germany**. Narrow escapes from disaster were also frequent. 'Returning from **Bremen**,' reads one pilot's report, 'we found visibility less than 500 yards and cloud down to 200 feet. Running out of petrol so force-landed in a rather small field.' On 20 December 1940 one of a small force of Whitleys detailed to attack **Berlin** was hit by anti-aircraft fire during its return flight. One engine failed and all movable gear was jettisoned as the captain, Pilot Officer Bridson,² struggled to maintain height. But just after crossing the English coast the other engine, which had become very overheated, faltered and the Whitley began to lose height rapidly. Bridson promptly ordered his crew to bale out and, when all were clear, followed himself. The aircraft crashed shortly afterwards but all the crew landed safely. Bridson lost his life three months later when his machine crashed into the sea during a training exercise, but a member of his crew who survived the war writes: 'Bridson did a splendid job in piloting the aircraft several hundred miles on one engine, and only ordered us to bale out when he could no longer control it.'

During these winter months the men with the **Blenheim** squadrons of both Bomber and Coastal Commands flew a variety of missions against fringe targets on the Continent, as most of the industrial areas in **Germany** were beyond the effective range of the **Blenheim**. By day as well as by night, small formations raided the 'invasion ports', oil storage depots, and railway marshalling yards on the edge of enemy territory, the daylight attacks usually being made in cloudy weather which afforded some protection against the German defences. At night harassing attacks were also made on the airfields in **Holland**, **Belgium**, and **France** from which the

¹ Some idea of the difficulties which crews experienced in these missions over the Alps during the severe winter of 1940 may be gleaned from the detailed account of Miller's flight given in **Appendix II**.

² Pilot Officer A. Bridson, DFC; born Silverdale, **Auckland**, 19 Oct 1918; motor engineer; joined **RAF** Apr 1940; killed in flying accident, 14 Mar 1941.

German bombers were flying against **Britain**. The Blenheim, which did valiant service during this period, was stoutly built and often survived after hitting the sea or ships' masts, and even, in one case, after grazing the top of a hill. Most pilots regarded it as a pleasant aircraft to fly—buoyant, aerobatic, and sensitive to the controls.

Early in March 1941 the emphasis in daylight operations shifted to attacks on shipping in the North Sea and **English Channel**, which have already been described in the last chapter. At the same time, raids on the ports used by these vessels and other targets on the fringe of enemy territory were continued by the Blenheims. Small formations flew just above the sea and went in low over the coast in order to surprise the enemy gunners. Then, having located the target and unloaded their bombs, they turned sharply and 'beat it for home'. One of the more spectacular of these raids was that made by twelve Blenheims from No. 105 Squadron against the dock area at **Bremen** on 4 July. Pilot Officer Buckley ¹ was captain of one and Sergeant Williams ² navigator in another aircraft of the formation led by their squadron commander, Wing Commander Edwards, ³ of **Fremantle, Western Australia**. There was bright sunshine and little cloud as the Blenheims approached the port. They flew in low through the balloon barrage and under high-tension cables to attack from chimney-top level—one machine actually brought back telephone wires trailing from its tail wheel. Bombs were seen to fall near the docks and on the railway station, and German records state that considerable damage was caused in a factory making parts for aircraft, while a minesweeper under construction in the shipyards received a direct hit. Ships off the coast had reported the approach of the bombers and they were greeted by a hail of anti-aircraft fire. Four were shot down and most of the others seriously damaged. Williams' machine was hit by three shells and both he and his rear gunner badly

wounded. But despite his injuries, he successfully navigated his aircraft back to base where it crash-landed. Edwards won the Victoria Cross for his leadership in this raid.

Another raid, in which both Buckley and Williams took part, was made against the docks at Le Havre by nine Blenheims. By approaching out of the sun the British aircraft took the enemy defences more by surprise; no enemy fighters were encountered and there

¹ Flight Lieutenant J. Buckley, DFC; **Auckland**; born **Wanganui**, 29 Nov 1915; joined **RAF** Mar 1940; transferred **RNZAF** Jan 1944.

² Flying Officer W. N. Williams, DFC, DFM; **Christchurch**; born **Dunedin**, 23 Nov 1913; hairdresser; joined **RNZAF** Apr 1940.

³ Group Captain H. I. Edwards, VC, DSO, OBE, DFC; **RAF**; born **Fremantle**, Western **Australia**, 1 Aug 1914; joined **RAF** 1936; commanded No. 105 Sqdn, 1941; CFI, No. 22 OTU, 1941–42; commanded No. 105 Sqdn, 1942–43; **RAF** Station, **Binbrook**, 1943–44; **RAF** Station, **Chittagong**, **ACSEA**, 1944–45.

was only slight anti-aircraft fire. The Blenheims escaped without loss, leaving a large pall of smoke over the dock area as they turned for home. But like the daylight attacks on shipping, these low-level raids on land targets were usually more costly. In a daring attack on the power stations at **Cologne** early in August, twelve of the 50 Blenheims taking part were lost. One was seen to have its tail cut off by a high-tension cable; the others were either shot down by anti-aircraft fire over the target or fell victim to enemy fighter attack. As far as possible British fighters escorted the Blenheims on these daylight raids, but this protection was, of necessity, limited by the short range and endurance of the contemporary fighter aircraft. On this occasion the Blenheims could only be escorted as far as **Antwerp**, and consequently they were exposed to fighter attacks over enemy territory. One of the aircraft lost

in such encounters was captained by Flight Lieutenant Herbert,¹ who only a few weeks previously had fought a gallant engagement with a Messerschmitt over the Channel. During that combat his machine was so badly damaged that he had to crash-land on the beach as soon as he reached the **Sussex** coast. About the same time Sergeant Simpson,² after a successful career in daylight attacks on ports and shipping, lost his life in a more typical small-scale raid on an aerodrome in **Holland**. Messerschmitts intercepted the four Blenheims and two were shot down. A third was badly damaged and crash-landed on return, seriously injuring two of its crew. Altogether, between 12 March and 14 July 1941, 68 Blenheims were lost in daylight operations. The **Blenheim** was an easy prey for the German fighters and, in the low-level attacks, a good target for the anti-aircraft gunners. But as Sir Arthur Harris³ writes in *Bomber Offensive*: 'The gallantry of the crews was beyond praise. Their determination never wavered though I know many of the men felt that they were being sent to almost certain death.'

However, these daylight attacks, inspiring though they were at this grim period of the war, were subsidiary to the main bomber offensive, and throughout 1941 the majority of the New Zealanders with Bomber Command continued to fly on night operations against

¹ Flight Lieutenant A. G. Herbert; born Frankton Junction, 4 Jun 1918; baker; joined **RNZAF** Jul 1940; killed on air operations, 12 Aug 1941.

² Sergeant A. W. Simpson; born Southbridge, **Canterbury**, 18 Nov 1908; accountant; joined **RNZAF** Apr 1940; killed on air operations, 4 Jun 1941.

³ Marshal of the Royal Air Force Sir Arthur Harris, Bt., GCB, OBE, AFC, Order of Suvorov (**USSR**), Legion of Merit (US), Order of Polonia Restituta (Pol), National Order of the Southern Cross (Bra), Distinguished Service Medal (US); **Capetown**, South Africa; born Cheltenham, Gloucestershire, 13 Apr 1892; served 1 Rhodesian Regiment, 1914–15; RFC 1915; transferred **RAF** 1918;

permanent commission 1919; AOC Palestine and **Transjordan**, 1938–39; AOC No. 5 Bomber Group, 1939–40; DCAS, **Royal Air Force**, 1940–41; Head of British Air Staff, **Washington**, 1941–42; AOC-in-C, Bomber Command, 1942–45.

objectives in **Germany**. During the early months of that year the targets detailed for attack were within such towns as **Hamburg**, **Bremen**, **Cologne**, **Hanover** and **Berlin**, although, owing to the distance to be covered across enemy territory, the scale of the attack on the German capital was light. These places had been selected because they contained important industrial objectives and, at **Hamburg** and **Bremen**, port facilities, ships and shipyards that had a direct connection with the Battle of the **Atlantic**. The policy of concentrating the bomber force against one or two main areas on any given night had now been adopted, and gradually the choice of specific targets within these areas gave way to a central aiming point. Yet, although a list of priority targets was laid down at the beginning of the year, the restricting influence of the weather ruled out bombing to any set programme. ‘I have the greatest difficulty,’ wrote Air Marshal Sir Richard Peirse, ¹ Air Officer Commanding-in-Chief at this time, ‘not only in forecasting the weather in the target area—or rather in trying to find a suitable target in the only area offered by the weather—but also in being assured of reasonable conditions at base airfields in England for homing purposes.’

Altogether, during the first five months of 1941, the largest total effort directed against any individual area in **Germany**—900 sorties against **Hamburg**—was less than that of a single night in 1944. Furthermore, rarely was any degree of concentration achieved in this early area bombing. On many nights, owing to cloud and haze, the towns themselves proved very difficult to locate. At other times crews genuinely believed they had found their target when, in fact, they had bombed miles from it. An examination of night photographs ² taken during June and July revealed that, of those aircraft which reported attacking their objectives in **Germany**, only one in four got within five miles of it, and when the target was in the smoke-laden Ruhr, only one

in ten. There was, unfortunately, a remarkable contrast between the enthusiastic reports received from many crews and the 'travellers' tales' from **Germany** via **Sweden** or **Switzerland**, and, on the other hand, the night photographs of open country or the bleak pictures of lightly damaged towns brought back by the Spitfires on daylight reconnaissance.

¹ Air Chief Marshal Sir Richard Peirse, KCB, DSO, AFC, Croix de Guerre (It), Order of Polonia Restituta (Pol), Order of Orange Nassau (Hol), Legion of Merit (US); **RAF** (retd); England; born Croydon, **London**, 30 Sep 1892; joined RNR 1913; seconded RFC 1913; RNAS 1914; **RAF** 1918; permanent commission **RAF** 1919; AOC-in-C, Bomber Command, 1940–42; AOC-in-C, **India**, 1942–43; Air C-in-C, SEAC, 1943–44.

² Night cameras were just being introduced. The photographs were taken automatically by a camera fitted in the belly of the aircraft. A flash bomb was released at the same time as the bombs; it exploded at about 3000 feet and lit up the ground, while at the same time the camera shutter opened long enough to get a good photograph. Ultimately, the night photographs were accepted as the only evidence of where the bombs fell.

Yet it was not the fault of the bomber crews that they failed to achieve the impossible. Equipment and training for night bombing were still in the experimental stage, while the many difficulties which faced the airmen flying over **Germany** were not yet fully realised. The only aids available to the navigator at this time were his compass, map, sextant and direction-finder loop, together with what he could see of the ground by starlight, moonlight, or the glow of an occasional flare. It was hard enough to get to the target area, but if and when the aircraft got there, the navigator still had the more difficult task of getting a visual fix of the aiming point or of some landmark which he could positively identify and from which he could make a run of a few miles to the target. Already the enemy's balloon and anti-aircraft defences were forcing the bombers to fly at heights which made identification much

harder. Often after contending with unpredicted changes in wind strength and direction, or flying through storms with no possibility of pinpointing their position, a crew would eventually reach the vicinity of the target only to find the whole area covered by thick cloud or haze. It was impossible to check whether their navigation was accurate or not and all that remained was to bomb on estimated time of arrival or to wait hopefully, as many did, for a break in the murk through which it might be possible to catch a glimpse of the ground. Most crews were reluctant to admit failure and bomb the 'alternative' target given them at briefing. A further difficulty was the fact that the enemy had already begun to employ various devices to mislead the British crews into wasting their bomb load. The decoys took the form of fires, flares and explosions, together with dummy airfields complete with buildings and flare paths. Later this deception became more elaborate, particularly in the vicinity of **Hamburg** and **Berlin** where lakes were covered over and false landmarks built in the surrounding countryside.

Lingering in the vicinity of a well-defended area in order to identify a target with some certainty meant that the aircraft, even if it was not hit, was blown about in the air by bursting shells. 'One large piece of shrapnel went clean through the table at which the navigator was working. Altogether we were hit thirteen times as we flew round trying to locate our objective,' declared the captain of one Hampden after an attack on **Hamburg**. Just before dawn on 11 May 1941 a lone **Stirling**, somewhat battered and scarred, limped in to land at its base in East Anglia. It was one of five bombers that had set out the previous evening to make an harassing attack on **Berlin**. When the German capital was reached the whole area was found to be obscured by cloud, but the captain, Flight Lieutenant Raymond,¹ decided that there was some chance of making an attack

¹ Squadron Leader C. Raymond, DFC; born Waipawa, 18 Oct 1916; farmer; joined **RNZAF** Sep 1939; transferred **RAF** Jun 1940; killed on air operations 23 Sep 1942.

through a gap in the clouds. He cruised around until a temporary clearance giving a reasonable chance for sighting did, in fact, occur. But by this time anti-aircraft fire was getting uncomfortably close, and just as the **Stirling** completed its bombing run the inner port engine was hit. A few moments later the propeller flew off, striking the one alongside it. The damaged engine then caught fire and the aircraft began to lose height. The fire persisted and gave the ground defences a clear indication of the bomber's position. Searchlights held it continuously and then, before the crew could extinguish the flames, a Messerschmitt came in and made a series of determined attacks. One gun received a direct hit, the tail turret was blown out, and the hydraulic controls severed. Eventually, by dropping a flare which momentarily distracted the searchlights and then diving away, Raymond was able to get his badly damaged machine clear and, displaying fine airmanship, fly it back to England. He lost his life sixteen months later during a raid on **Bremen**, but a member of his crew who survived the war writes of the long return flight from **Berlin**:

We crossed the Dutch coast at about 5000 feet and as the aircraft was gradually losing height, we were prepared for a landing in the sea. However, through the skill of our pilot, we reached the English coast near Yarmouth flying at less than 1000 feet and Raymond then managed to keep our machine airborne for the few minutes needed to reach our base where he made an excellent landing. The following day, representatives of Short Bros. came to inspect the **Stirling** and on seeing its condition were extremely surprised that the pilot had been able to get it back to England.

Even at this period, when the enemy defences were still in a rudimentary stage, such experiences were not infrequent. Apart from this, flying over **Germany** by night was in itself an exacting and arduous task. It brought that mixture of boredom and anxiety which is among the most wearing of human emotions. This was particularly true in the case of the rear gunner—known colloquially in the service as 'tail-end Charlie'. His was probably the most unenviable post in a bomber crew.

Huddled in his turret and isolated from the other members of the crew, he had to remain constantly on the alert to warn his captain of impending attack from the rear. Yet when such an attack came he had only a matter of seconds in which to bring fire to bear on the enemy; nor is it surprising that he was sometimes caught unawares by the sudden swoop of a dark shape from out of the night. Often, too, the German night fighters attacked when the British bomber, held in the glare of searchlights, was a sitting target. But sometimes keen eyesight and good shooting turned the tables on the enemy. An example of this occurred on the night of 12 March, when Flying Officer Lewis ¹

¹ Squadron Leader R. E. Lewis, DFC; England; born **Wellington**, 3 Dec 1917; joined **RAF** Jan 1939.

was in the rear turret of a Wellington flying home from a raid on the Focke-Wulf aircraft factory at **Bremen**. Near the Dutch coast a Messerschmitt passed by flying in almost the opposite direction. It immediately turned to attack, but before it had got round on the Wellington's tail Lewis picked it up in his gun sights and fired two bursts. The Messerschmitt fell away and the crew saw 'a dull red glow fall seawards through the mist.' 'On the night of 2nd July,' reads another report, 'a **Stirling** aircraft was on its way to **Bremen** when it was attacked by a night fighter. The rear gunner, Sergeant P. C. Whitwell, ¹ withheld his fire until the enemy machine had closed in, whereupon he shot it down in flames.' Some time after this incident, Whitwell again distinguished himself while flying in one of two Stirlings making a daylight attack on ships off the Dutch coast. Over the convoy the two aircraft were intercepted by eight Messerschmitts and a running fight ensued, during which Whitwell drove off repeated attacks, 'showing conspicuous coolness and ability when the odds were seriously against him.' His crew saw two of the enemy fighters turn over and dive away after encountering fire from his turret. Although badly shot up, both the British machines managed to reach their base safely.

From July 1941 there was a distinct change in the target 'areas' which the night bomber crews were detailed to attack. The need to aid **Russia** was urgent,² and it was decided that this could best be done by bombing important links in the German transport system. At the same time it was felt that such attacks would have a direct effect on the morale of the German population, as the railway yards and inland docks were usually adjacent to congested areas where the effect of heavy air bombardment would be most marked. The best rail targets, within effective range of the Wellingtons, Whitleys and Hampdens throughout the year, lay in western **Germany**. Unfortunately, the first heavy attacks attempted against the marshalling yards north-east of the Ruhr, at **Hamm**, Osnabruck, Soest and Schwerte, were without appreciable result as, on almost every occasion, the targets lay under such thick haze that neither they nor the towns themselves were seriously damaged. Raids on such communication centres as **Munster**, **Cologne**, **Hanover**, **Mannheim**, **Aachen**, **Kassel** and **Duisberg** followed, the most successful being that on **Munster** which was attacked on four successive nights during the July moon in excellent visibility. Some twenty acres of the inland port were burnt out and damage inflicted on the railway station and yards. By the end of October considerable fire damage

¹ Flying Officer P. C. Whitwell, DFM; born Hartlepool, **Durham**, 16 Aug 1920; soldier; joined **RNZAF** Feb 1940; killed on air operations, 7 Nov 1942.

² The German invasion of **Russia** had begun on 22 June 1941.

had also been caused in **Aachen** and **Kassel**, but in the other towns attacked the destruction was much less extensive and more scattered. Many of the raids had, in fact, proved abortive and served only to demonstrate the virtual impossibility at this time of hitting targets shrouded in haze and industrial smoke. On the other hand, the raids on the German ports of **Hamburg**, **Bremen** and **Kiel**, which were somewhat

easier to locate, appear to have produced a moderate degree of damage and delay in the docks and shipbuilding yards. Altogether, the harassing attacks of these months had just sufficient effectiveness, under the best conditions, to impress upon the Germans that night bombing would have to be strenuously opposed. Ironically, therefore, the most important result of the bombing offensive at this time was to draw the enemy's attention to the urgent necessity of combating it before the weight and accuracy of the attacks increased.

In the early months of the war the Germans had relied entirely upon guns and searchlights for defence against night bombing attacks. The night fighter organisation did not come into being until June 1940, when searchlight interception and predicted anti-aircraft fire began to prove less effective than had been anticipated. At first progress was slow, but once the Germans realised the danger, they applied themselves to the task with characteristic energy and thoroughness. Eventually they were to assemble a night fighter force with a widespread and efficient ground organisation that was to present a real threat to the continuance of operations by Royal Air Force Bomber Command. Then the Battle of **Germany**, as it might well be called, became an ever-recurring cycle of measure and counter measure, of development and counter development in radio and radar instruments and in tactics. One incidental but important result of this battle was the diversion of large numbers of men and aircraft to the night defence of the Reich, thus depriving the German **Air Force** of its striking power and keeping many potential soldiers on anti-aircraft sites. ¹

During the second half of 1941 the growing strength of the German defence organisation was reflected in a sharp rise in the British casualty figures. Two hundred and forty-six aircraft, representing nearly 8 per cent of the forces despatched, were lost or seriously damaged on night operations during August and September. Not all of these were lost over **Germany**, but more crews

¹ In the summer of 1941, when the German Army invaded

Russia, it had the support of 2800 aircraft, or nearly 60 per cent of the whole **German Air Force**. But two years later this had been reduced to less than 20 per cent. Production had been switched to fighter aircraft to defend the Reich against Bomber Command's attacks, and during 1943 the front-line strength in **Germany** for this purpose increased by nearly 1000 aircraft; yet at the end of the same year, the German Army in **Russia** had only 350 fighters along a front of 2000 miles. A similar decline occurred in the **Mediterranean** theatre.

now reported being attacked by night fighters over enemy territory. The Germans were employing larger numbers of the twin-engined Messerschmitt 110 for night interception. These aircraft, each patrolling in a limited zone, were controlled from the ground by radio-telephony and operated in close co-operation with searchlights and anti-aircraft guns. Airborne radar was still in the experimental stage in **Germany**, but ground radar was in use both as an aid to the searchlights and guns as well as to the night fighters. Early warning stations were also being installed along the North Sea coast and, behind them, ground interceptor stations and searchlights which, by the end of 1941, extended in a belt from **Denmark** through **Holland** and down the western frontier of **Germany**—an area which had to be crossed by the British bombers before they could reach their targets in **Germany** and again during the return flight. In addition to establishing this outer defensive line, the Germans were also increasing the searchlight and gun defences of their principal cities and industrial areas.

At this time the searchlights were regarded by many of the bomber crews as their greatest enemy. 'We always felt completely naked when caught by them,' writes one bomber pilot. 'Only by diving steeply and taking violent evasive action could we hope to escape their blinding glare.' But sometimes before this happened the bomber was struck by fire from the ground or from a patrolling night fighter. 'A Wellington near us was heavily hit and blew up in mid-air....' 'We saw one of our formation go down like a blazing torch.' Behind such brief reports lay stories of grim encounters with the enemy defences and of courage in

the face of disaster that can never be told. However, the reports of those who survived the hazards of searchlight, anti-aircraft gun, and night fighter give some idea of what the bomber crews faced on their missions over **Germany** as the enemy defences steadily increased. One such account concerns the crew of a Wellington bomber which attacked **Cologne** on the night of 16 August. Shortly after taking off the inter-communication system failed and then engine trouble caused difficulty in maintaining height, but the Wellington flew on and bombed its target, the crew reporting fires started near the aiming point. Flak and searchlights were encountered both over the target and during the return journey. Then, near the Dutch border, a Messerschmitt suddenly attacked, killing the rear gunner and setting the Wellington on fire. The pilot, Sergeant Sutherland, ¹ put the machine into a dive and escaped before the German fighter could attack again. The fire, fed by oil escaping from the damaged rear turret, was eventually extinguished, but while still flying over

¹ Flight Lieutenant V. E. Sutherland; born **Wellington**, 11 Nov 1912; law clerk; joined **RNZAF** Jul 1940; killed in flying accident, 31 Dec 1942.

enemy territory the Wellington was again hit by flak. Yet despite extensive damage, Sutherland managed to get his aircraft back to England and land safely. Sergeant Newenham ¹ flew as navigator to Sutherland at this time, together with Sergeant Warnock, ² second pilot. But, as so often happened, this New Zealand partnership did not long survive. A few months later Warnock lost his life when the engines of his machine failed during a training flight, and Sutherland was killed in similar circumstances some months later. Only Newenham survived the war.

Early in November 1941 Flight Sergeant Hamilton ³ shared with the British crew of his Wellington bomber one of the most amazing experiences of the year. Their aircraft was one of a force of 140 bombers despatched to attack **Berlin** on the night of 7 November. ⁴ Over the

North Sea they ran into cloud which thickened as the Wellington flew on into **Germany**. Then, as they approached **Berlin**, anti-aircraft batteries began firing through the cloud with predicted fire. Their machine was thrown about in the air and eventually hit several times by shrapnel, but they flew on and dropped their bombs on the German capital. Shortly after turning for home the Wellington received a direct hit from anti-aircraft fire, and some incendiary bombs, which had been kept for a secondary target, were set alight. Soon the inside of the aircraft was filled with choking fumes, then smoke and flames began to come up through the floor. Within a few minutes the bomber was ablaze along the whole length of its bomb racks and an easy target for every gun within range. Shells began to burst all round and again the Wellington was thrown about and peppered with shrapnel. The extinguisher ran out before the fire could be completely subdued, and for the next three hours the crew had to beat at the flames each time they flared up again. Eventually, with much of the fabric on one wing and on both sides of the fuselage burnt away, the Wellington, which had been steadily losing height, came down on the sea some twenty miles off the mouth of the **Thames**. It broke up quickly and sank within a minute, but during that time all six of the crew managed to get clear and scramble into the rubber dinghy. But their ordeal was not yet over. In spite of frantic

¹ Squadron Leader W. A. Newenham, DFC; **RAF**; born **Nelson**, 23 Jun 1914; salesman; joined **RNZAF** Oct 1939; transferred **RAF** Jun 1947.

² Pilot Officer J. M. Warnock; born **Richmond, Nelson**, 13 Apr 1915; interior decorator; joined **RNZAF** Jul 1940; killed in flying accident, 8 Apr 1942.

³ Flight Sergeant D. A. S. Hamilton; born **Hamilton**, 19 Jan 1920; carpenter; joined **RNZAF** Sep 1940; killed on air operations, 1 Apr 1942.

⁴ This was the heaviest attack so far delivered against the German capital. Very severe icing was encountered en route and only 73 aircraft claimed to have reached **Berlin**, which they found covered with thick cloud—21 aircraft failed to return. Thereafter, with one exception, heavy attacks on the city were abandoned until 1943.

efforts with the paddles the tide swept them into the Channel, where they drifted unseen for two and a half days before being washed up, numbed and frostbitten, on the Isle of Wight.

‘We paddled all the first day and most of the night but the tide was too strong for us,’ wrote Hamilton. ‘The second day was cold with heavy seas running. We saw some Hurricanes in the distance but they missed us. We rationed our few biscuits, some chocolate and water. The third day the wind and seas grew worse. But suddenly we saw land and were afraid we were going to be swept past so we paddled as best we could and were at last washed in to the rescuers who waded out to us.’

Hamilton returned to operations only to be reported missing over **Germany** four months later.

Some of the crews who failed to return survived harrowing experiences to become prisoners of war.

‘We were about thirty miles inland from the enemy coast,’ writes the New Zealand navigator of a **Stirling** bomber which was detailed to attack **Hamburg** one night in July. ‘Suddenly, without warning we were in a cone of searchlights. Then the guns opened up and caught us with a direct hit, blowing a large hole in the floor and almost cutting the plane in half. One of our engines was on fire and part of the starboard wing had disappeared. We flew on towards **Hamburg** in an attempt to deliver our load, but as we approached the city a night fighter attacked, killing the rear gunner, smashing the wireless set and killing the operator. My navigation table was blown through the side of the machine. We dropped our bombs and prepared to bale out as our **Stirling** was losing height

rapidly.... The plane just missed me as it went spinning down to explode on the ground....

Another New Zealand navigator in a Wellington bomber was rescued from the sea by the Germans, along with two other members of his crew who survived when their damaged aircraft crashed into the sea near Heligoland on the return flight. A westerly wind carried the dinghy with the three chilled and exhausted men back towards **Germany**. Late the next afternoon they drifted into Sylt harbour, where they were sighted at dusk by a German pilot just finishing a practice flight. They were picked up by an enemy naval launch an hour later.

During September 1941, with the approach of longer hours of darkness, several raids were attempted against targets in northern **Italy** but the only attack which achieved any degree of success was the first, on the night of 10 September, against Turin. On this occasion 23 of the new four-engined Stirlings and Halifaxes supplemented the effort of 50 Wellingtons. The weather was clear and, although most men suffered from the intense cold of the Alpine crossings, good results were observed. A considerable number of fires were left burning in the target area, one of which was reported to be still visible after some fifteen minutes of the homeward flight.

A fortnight later the force despatched to Genoa had to be recalled owing to deteriorating weather at home bases, and a second attempt against the same target two nights later was attended with little better luck. As the bombers neared the Alps they met thick cloud and electrical storms; several were forced to turn back, but the majority completed the crossing only to find layers of cloud over Genoa itself. There was also considerable ground haze, with the result that many crews were unable to identify the aiming point and had to bomb its estimated position. Attacks on **Italy** were thereupon suspended as the bomber force now became preoccupied with increasingly heavy losses over **Germany** and the demand for heavier attacks on the enemy warships at **Brest**.

The German Navy had begun to use the French Atlantic ports at the

end of 1940. The cruiser *Hipper* arrived in **Brest** on 28 December and, apart from a brief excursion into the **Atlantic** at the beginning of February 1941, remained there until the middle of March, when she returned to **Kiel**. The battle-cruisers *Scharnhorst* and *Gneisenau* reached **Brest** towards the end of March, where they were joined by the cruiser *Prinz Eugen* at the beginning of June. Throughout the year New Zealand airmen had flown on many of the smaller scale raids directed against the enemy-occupied ports from **Rotterdam** to Bordeaux, and more especially against the German warships in **Brest**, the docks in which they were repaired and the submarine base. These were short-range targets and there was no stretch of enemy territory to cross before reaching them. But because of this vulnerability the Germans had increased the anti-aircraft and searchlight defences, particularly in **Brest**, which was also the first town on the Continent to be effectively defended by a quickly laid smoke screen. In addition, the Germans had based day and night fighter squadrons in close proximity to the ports and had built radar stations on the coast to give early warning of impending attacks. The warships, heavily protected in dock at **Brest**, were difficult to damage decisively; opportunities for underwater damage were absent and full facilities for repair were readily available. On the few occasions when they were moored to a jetty, the ships were almost completely sheltered from torpedo attack by booms and nets. ¹ Apart from this, heavy armour plating on the decks gave considerable protection against bombing. Nevertheless, the attacks made during 1941 did cause repeated damage, sufficient to prevent the enemy warships from putting to sea to prey on **Atlantic** shipping, and eventually the Germans decided to abandon the port

¹ There was, however, one successful torpedo attack. At dawn on 6 April 1941, a single **Coastal Command** Beaufort piloted by Flying Officer K. Campbell, of Ayrshire, **Scotland**, ran the gauntlet of the enemy defences and hit the *Gneisenau*. The Beaufort was shot down but the German warship was forced to return to the dock she had just left. Campbell was awarded the Victoria Cross posthumously.

as a base for such operations. **Vice-Admiral Ciliax**, at that time **Commander-in-Chief at Brest**, writes: 'The tenacity with which the **Royal Air Force** attacked the ships from the day of their arrival was remarkable. The aircraft succeeded in causing damage continuously ... and the relinquishing of what was, after all, the first German naval station on the open **Atlantic** for larger units, was felt severely.'

The raids on **Brest** were made mainly, although not entirely, by night. During the early months of the year gallant attempts to surprise the enemy defences were made in daylight by small formations of **Beauforts** and **Blenheims** of Coastal and Bomber Commands. They faced withering fire from anti-aircraft ships moored in the outer harbour and from batteries clustered round the port. Losses were heavy. On one occasion four out of six **Blenheims** failed to return. In another attack all three **Beauforts** despatched were shot down. One of the latter, piloted by **Flying Officer Gair**,¹ crashed near a small village in Brittany. He and his crew were buried by the French in the *place d'honneur* by the memorial to the First World War, after a special service attended by nearly all the village folk, despite German orders to the contrary.

The heaviest daylight attacks of the year were made towards the end of July, when it appeared that at least one of the German warships was about to put to sea. In fact, the *Scharnhorst* left **Brest** on the 22nd and was discovered by reconnaissance the following day in harbour at **La Pallice**, 250 miles south of **Brest**. Six **Stirlings** attacked the same afternoon. Only three returned. Early the next afternoon 15 **Halifaxes** of **Air Vice-Marshal Carr's** group flew to **La Pallice** and made a determined attack on the battle-cruiser, inflicting such damage that her sortie into the **Atlantic** was cancelled and she returned to **Brest**. A German record of this attack states: 'Five bomb hits were scored. Three of the bombs failed to explode and penetrated right through the ship.' But in addition to the anti-aircraft defences, the Germans had sent fighters south to protect the *Scharnhorst* and five of the **Halifaxes** were shot down. **No. 76 Squadron**, led by **Wing Commander G. T. Jarman**, was heavily engaged by **Messerschmitts** in the vicinity of the target and three of the

formation were lost. Jarman's aircraft itself was badly shot up and limped back with one engine out of action. However, he was able to report the destruction of two enemy fighters by his squadron.

On the same day, a simultaneous attack was launched against the *Gneisenau* and *Prinz Eugen* at **Brest** by a force of just over a

¹ Flying Officer R. W. Gair; born **Wellington**, 12 Mar 1919; joined **RAF** Mar 1939; killed on air operations, 15 Feb 1941.

hundred Wellingtons and Hampdens. The first two Wellington squadrons over the port, led by Wing Commander T. O. Freeman, succeeded in maintaining tight formation in spite of anti-aircraft fire, and were thus able to drive off subsequent attacks by enemy fighters. One captain from Freeman's squadron afterwards reported that 'the Messerschmitts gave up their attacks and flew round waiting for stragglers.' But other sections of aircraft were less fortunate; they met determined attacks and were only able to beat them off after a series of sharp engagements in which most of the bombers were badly shot up. Clear weather enabled the anti-aircraft defences to break up many of the later formations, and as the bombers dispersed the Messerschmitts dived upon them. Combats quickly developed over a wide area and 13 British aircraft were shot down.

Harassing attacks, mainly by night, were continued against **Brest** throughout the second half of 1941 but, apart from two heavy raids in September, the average effort was only 15 aircraft in the night attacks and considerably fewer by day. The effectiveness of these attacks was much reduced by the enemy's use of smoke screens and skilful camouflage of the ships themselves, and at the beginning of December reconnaissance revealed that heavier attacks would be necessary to confine the vessels to port. The need to neutralise these powerful warships became more urgent following the destructive Japanese attack on the United States Pacific Fleet at **Pearl Harbour** on 7 December and the sinking of HM ships *Prince of Wales* and *Repulse* off the Malayan

Peninsula three days later.

The scale of the night attacks was therefore increased, but the chief hope of success at this critical time lay in another daylight raid in strength. Such an operation was executed just after midday on 18 December by a force of 47 heavy bombers, Halifaxes, Stirlings and Manchesters, following upon a heavy raid the previous night. The crews had trained for several days in formation flying so that they could attack in sections, and in a further effort to reduce losses the approach was made from the landward side of **Brest which was less heavily defended. It was an afternoon of clear skies and bright sunshine, rare in this first month of the northern winter, and both the escort of Spitfires and Hurricanes and the bombers had many encounters with the enemy fighters that came up to intercept the British force. One Hurricane and five bombers, including a **Stirling** piloted by Sergeant Taylor,¹ were lost. Three Messerschmitts were claimed destroyed. One of these fell to**

¹ Sergeant K. R. Taylor; born **Christchurch**, 16 Dec 1915; clerk; joined **RNZAF** Nov 1940; killed on air operations, 18 Dec 1941.

the guns of the leading aircraft of the bomber force, in which Flight Sergeant Runciman¹ was flying as second pilot.

Although we were the first aircraft over **Brest, the anti-aircraft guns seemed to concentrate on the machines behind us. We ‘collected’ the odd piece of shrapnel but the nearest thing was one shell which went straight through our starboard aileron and burst above us. We had just dropped our bombs and were turning for home when three Messerschmitts attacked us. However our rear gunner immediately sent one down and the others broke away. We got clear and reached base before the ‘lame ducks’ started arriving.**

Only two of the nine aircraft sent by Runciman’s squadron escaped major damage. One bomber which had been badly shot up came in to

land with an engine on fire. The pilot made a normal landing, but as his machine touched down the burning engine fell off, bounced in the air and took off a piece of the tail. The port wing, weakened by fire, then broke off and the undercarriage collapsed.

Two New Zealand gunners who had successful engagements were Flight Sergeant Smith ² and Sergeant De Joux. ³ Smith's machine was attacked by several Messerschmitts in turn as it approached the target. He scored hits on one of them as it came in and the pilot was seen to bale out. De Joux's **Stirling** was attacked twice while over the target. In the first encounter the automatic mechanism of his guns was put out of action, but by the skilful use of his turret hand-rotation gear and also by operating the releases of his guns by hand, he managed to bring fire to bear on the enemy machine during the second attack and set it on fire. A number of the bombers were damaged by anti-aircraft fire and the fighter attacks, the **Stirling** in which Flight Sergeant Lewis ⁴ was flying as second pilot being hit several times by anti-aircraft fire, which tore holes in the fuselage and mainplane and put the rear turret out of action. One Halifax was so damaged that it was forced to land in the sea on the way home. A shell had knocked out an engine, causing it to lose speed and drop out of formation. Fighters then destroyed two more of its engines and it could not remain airborne.

The following morning Sergeant Mooney ⁵ flew a Beaufighter of **Coastal Command** in a low-level reconnaissance of **Brest**—it was the second occasion during the month on which he had undertaken such a mission. Flying within a few feet of the balloon barrage he obtained photographs which revealed the results of the attack. The

¹ Squadron Leader W. J. Runciman, AFC, DFM; **RAF**; born **Auckland**, 22 Oct 1920; draughtsman; joined **RNZAF** Oct 1940; transferred **RAF** Jul 1947.

² Flight Lieutenant J. M. Smith, DFM; born **Dargaville**, **Auckland**, 16 Mar 1917; shop assistant; joined **RNZAF** Sep 1940;

killed on air operations, 7 Sep 1942.

³ Flying Officer E. E. De Joux, CGM, DFM; Victoria, Australia; born Edinburgh, Scotland, 27 Jan 1921; joined RAF May 1940; transferred RNZAF Jun 1944.

⁴ Flight Sergeant J. Lewis; born Richmond, 28 Jul 1920; draughting cadet; joined RNZAF Nov 1940; killed on air operations, 6 May 1942.

⁵ Flight Lieutenant B. F. Mooney, DFM; born Dunedin, 12 Sep 1916; joined RAF Jan 1940; p.w. 11 Mar 1942.

Gneisenau had received a direct hit on the stern, while other bombs had fallen between the ships and the docks in which they were lying. But as subsequent events were to prove, neither vessel was crippled by this heavy daylight attack. In the night raids which followed, although the weather and the enemy defences made accurate bombing wellnigh impossible, the weight of attack was sufficient to cause the German High Command to consider the advisability of abandoning Brest as a base for the three larger naval vessels there and moving them to a home port.

For the men of Bomber Command the year 1941 closed on a note of disappointment and frustration. Daylight operations, in spite of the gallantry and fine spirit of the crews concerned, were now virtually abandoned, while heavy losses during the autumn had compelled a reduction in the modest scale of the night offensive against Germany. Both the number of nights on which bombers went out and the size of the force employed were considerably less. On the fifteen nights in November and eleven in December when operations took place, the usual effort was smaller than one hundred aircraft. But even when in full operation, this offensive had lacked the concentration in space and time necessary to cause appreciable disruption of the German transport system, dislocation of industry or softening of morale. Earlier

conceptions of what a limited and ill-equipped bomber force could achieve had been tried under the hardest conditions of war and found to be over-optimistic. Only now were the difficulties under which the crews laboured being fully realised. Night after night targets had been obscured by cloud or haze, since meteorological information from the Continent was not yet as highly developed as it later became with the advent of the Mosquito. On the other hand, operations from fog-bound bases in eastern England had often to be cancelled or aircraft recalled; or, as happened on several occasions, missions had been carried through at the cost of heavy casualties, the aircraft returning in such conditions that the difficulties of landing were too great for the pilots to overcome.

At the same time the demand for expansion of the force and the heavy casualties suffered during the year had denuded the operational squadrons of many of the more experienced men needed to train their successors. Finally, the introduction of night photography had shown the urgent need for better navigational aids to assist crews in locating their targets. This was the vital problem on which the scientists were already hard at work, and with the realisation of the various other shortcomings, greater efforts were now made to secure and equip a force of sufficient strength to do what many believed was already being done.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 9 – THE PART OF NO. 75 SQUADRON

CHAPTER 9

The Part of No. 75 Squadron

BY the beginning of October 1940 the New Zealand Bomber Squadron, under the leadership of Wing Commander Buckley, already had considerable operational experience behind it and was winning a place as one of the foremost units in No. 3 Bomber Group. In the next fifteen months the exploits of the air crews and the high standard of efficiency maintained by the ground staff were to enhance the reputation earned in the early months and establish a tradition of lasting value. During this period 145 New Zealand aircrew flew with the squadron, of whom 30 lost their lives. There was also a small band of New Zealanders among the ground staff, although the majority of those who serviced and maintained the Wellingtons were men from the **British Isles. Representatives from **Britain, Canada, and Australia** were also among the aircrews. Their presence gave the unit an Empire character and led to better understanding and friendship between men from various parts of the world.**

Royal Air Force Station, Feltwell, the base from which the squadron continued to operate, was situated in East Anglia—that flat part of England where wide fields roll gently towards horizons bounded by dark masses of elms, oaks and pines. This countryside is inhabited by a sturdy race of farmers sprung originally from the Danish marauders of the tenth century, and the New Zealanders, during their off-duty hours, soon found friends in farmhouses and in the homely villages where the beer was good and the hospitality warm and wholehearted. The airfield at Feltwell was a typical bomber base. Its buildings and surface were camouflaged to blend as far as possible with the shape and colour of the surrounding countryside. Roads, named after famous **London streets, connected the various buildings, which were widely dispersed so as to provide a minimum target. The nerve centre was the operations block where crews were briefed and where the progress of each aircraft from Feltwell taking part in a raid was recorded from the moment it was detailed to the moment it touched down on return. But the main centres**

of New Zealand interest were the squadron offices and the crew room where the men gathered before setting off on a mission. In the crew room each man had his own locker, and down the centre ran a long table on which the navigators spread their maps while planning their route to the target. On the walls were scrawled the names of New Zealand men and New Zealand towns, and cartoons and sketches filled the spaces between official diagrams and notices.

Life on the station proceeded according to a set routine and a happy team spirit prevailed—on more than one occasion during the winter months everyone turned out to clear a path through deep snow so that the heavily laden bombers could take off more easily. In the squadron each crew had its own aircraft and ground crew, while the names and insignia painted on the machines created a certain individuality and good-natured rivalry. The day usually began with a night flying test and a good deal of speculation as to the target for that night. The Wellingtons were then refuelled and ‘bombed up’ in readiness for their flight. Final briefing came in the late afternoon and then, after a meal and a short rest, the crews prepared for the take-off. On return from their various missions crews were met by the squadron staff, and then, over a cup of hot rum and coffee, men compared notes and discussed their flight while waiting their turn to be interrogated. Ground crews were invariably pleased to see their own particular aircraft come in after a raid, to hear an account of the flight and check on any damage or faults that may have developed.

The base at Feltwell was shared with No. 57 Squadron, with which a group of 30 New Zealand airmen served for various periods during 1941. Squadron Leader Freeman, who had been with the New Zealand Squadron from the outset, joined the sister unit as flight commander during the year. Among those who flew as captains of aircraft were Flying Officer Hunter, ¹ Pilot Officer Morse, ² Flight Sergeants Butt, ³ Heald, ⁴ Price, ⁵ and Stanford, ⁶ and Sergeants Clark ⁷ and Osborne. ⁸ Flight Sergeants Dow ⁹ and Sergeant ¹⁰ won

¹ Flying Officer H. E. Hunter; born West Melton, 23 Mar 1916; clerk; joined **RNZAF** Jul 1940; killed in flying accident, 16 Mar 1942.

² Pilot Officer N. P. Morse; born **Brisbane**, 14 Oct 1914; radio engineer; joined **RNZAF** Nov 1940; killed on air operations, 8 Apr 1942.

³ Flight Lieutenant C. H. Butt; born **Thames**, 4 Aug 1920; clerk; joined **RNZAF** Jul 1940; killed in flying accident, 4 Nov 1942.

⁴ Pilot Officer K. F. Heald; born **Auckland**, 10 Dec 1918; station hand; joined **RNZAF** Nov 1940; killed on air operations, 29 Apr 1942.

⁵ Flight Lieutenant D. G. A. Price; **Nelson**; born **Nelson**, 21 Feb 1912; tractor driver; joined **RNZAF** Jul 1940.

⁶ Squadron Leader K. J. Stanford, DFM; **RAF**; born **Palmerston North**, 5 Jan 1920; clerk; joined **RNZAF** May 1940; p.w. 22 Jul 1942; transferred **RAF** Jul 1947.

⁷ Sergeant B. A. Clark; born Dunedin, 12 Aug 1913; school teacher; joined **RNZAF** Jun 1940; killed on air operations, 6 Sep 1941.

⁸ Sergeant G. D. Osborne; born Te Kopuru, 20 Sep 1920; shop assistant; joined **RNZAF** Apr 1940; killed on air operations, 16 Jul 1941.

⁹ Warrant Officer G. H. Dow, DFM; **Wellington**; born Gravesend, **Kent**, 10 Feb 1910; clerk; joined **RNZAF** May 1940; p.w. 13 Sep 1942.

¹⁰ Warrant Officer F. C. Sergeant, DFM; **Palmerston North**; born **Wellington**, 17 Jul 1921; shop assistant; joined **RNZAF** May 1940; p.w. 17 Feb 1942.

distinction as a navigator and an air gunner respectively while flying with No. 57 Squadron during 1941.

The Wellington bombers with which both squadrons were equipped carried a crew of six, captain, second pilot, navigator-bomb aimer, wireless operator, and front and rear gunners. Of geodetic construction and covered with fabric, the aircraft had a wing span of 82 feet, was 64 feet long, and when empty weighed just over seven tons. ¹ It was fitted with two Bristol Pegasus radial engines of 1000 horsepower each, and armed with two hydraulically driven 303 Browning guns mounted in both the nose and tail turrets and one 303 gun on each beam. The Wellington's most economical cruising speed was about 165 m.p.h. at 10,000 feet. With a 1000-pound bomb load the range was 2500 miles, but with a full bomb load of 4500 pounds this was reduced to 1200 miles. The composition of the bomb load varied considerably and was dictated by the distance to be covered, the type of target, and the results it was intended to achieve. The bombs most often carried were 500 pound, 250 pound, and the 4-pound incendiary, the requisite weight normally being obtained by a combination of these bombs. On occasions, 1000-pound and 2000-pound bombs were also included in the load, and towards the end of 1941 No. 75 Squadron began dropping the new 4000-pound bomb on certain sorties.

Along with other units in Bomber Command, much of the work of the Wellington squadrons during 1940 had been largely of a defensive nature dictated by the pressure of events, but by October, as the threat of invasion began to fade, there came a turning over to the offensive. With the arrival of additional crews and aircraft and after the intensive training of past months, No. 75 Squadron was now well equipped for this role. Reinforcement had not only increased the fighting power but given added New Zealand character to the squadron, the number of men from

the Dominion having almost doubled since July.

During the closing months of 1940 the squadron took part in attacks on a variety of objectives in [Germany](#), such as fuel, power and transportation targets, aircraft component factories, naval installations and ships. On occasion, aerodromes and docks in enemy-occupied territory were also the objectives for some aircraft. However, with the onset of a severe winter there were many nights when the bombers were unable to take off, either because of conditions at base or over [Germany](#). When aircraft did succeed in getting away they often had to fly through dense ice-laden clouds and severe electrical storms which made accurate navigation most difficult. Frequently the choice of targets depended entirely on the

¹ With bombs, fuel and oil, the all-up weight of the aircraft was increased to 30,000 lb., or about 13 ½ tons.

weather and, for this reason, it was impossible to keep operations to any set plan. Nevertheless, the New Zealand Squadron operated on 28 nights during this period. Nor did the spells of operational inactivity find the squadron idle, as the ground crews were kept occupied by maintenance duties while the aircrew were busy with their training programme, which included night and cross-country flying, bombing and air firing exercises.

The early part of October was notable for an unusual encounter which resulted in the destruction of a German night fighter. As the hunted, it was not unusual for the bombers to be subjected to surprise attacks, but on the night of the 10th, while returning from an attack on the oil plant at [Gelsenkirchen](#), the Wellington captained by Pilot Officer McArthur ¹ assumed the role of hunter. Over [Holland](#) an enemy aircraft was sighted, caught in the beams of several searchlights. These were put out when signals were fired and a blue recognition light switched on. McArthur realised that, with this light to guide him, he was in an ideal position to deliver a surprise attack. Putting the Wellington into a steep

dive he got within range; his front gunner fired four short bursts and the crew had the satisfaction of watching the German machine crash and begin to burn.

The weather was responsible for most of the misfortunes which befell No. 75 Squadron during October. On the night of the 16th, when nine aircraft flew to attack enemy battleships at **Kiel**, they met dense cloud on the return journey. The crew of one Wellington, after losing the trailing aerial on high-tension cables while attempting to break through the murk, found themselves among the close-hauled balloons and factory chimneys of Hull and then over some woods 'whose topmost branches scraped horribly against the bottom of the fuselage.' After two hours' vain search for a clearance, and with petrol running low, the crew were forced to bale out after the bomber had climbed to a safe height. They escaped without serious injury. When the squadron next operated, on the night of 21 October, two aircraft crashed in fog after attacks directed against the *Bismarck*, then at **Hamburg**. One was burnt out but the occupants were not injured. The other lost its port airscrew on the way back and crashed while attempting a forced landing, with slight injuries to the crew. **Berlin** was the target on the night of the 23rd, when the Wellington captained by Pilot Officer Sanderson ² failed to return—the bomber was believed to have crashed into the sea, but an intensive air-sea rescue search proved fruitless.

¹ Flight Lieutenant D. H. McArthur, DFC; born Warkworth, 15 Jul 1920; farmer; joined **RAF** Jan 1940; killed on air operations, 4 May 1942.

² Pilot Officer R. M. Sanderson; born **Thames**, 8 Jun 1916; joined **RAF** Jul 1939; killed on air operations, 24 Oct 1940.

The most important raids in which the New Zealand Squadron took part during November 1940 were against **Munich**, **Hamburg**, and **Berlin**. At **Munich** large fires were started in the marshalling yards and crews saw many explosions. For the attack on **Hamburg**, with oil installations

and power and rail facilities as the targets, a force of 131 aircraft was despatched by Bomber Command. Five Wellingtons from the New Zealand Squadron bombed the marshalling yards and a sixth attacked the docks. November was also to bring a change in command, Wing Commander Buckley, who had led the squadron since its formation, handing over to Wing Commander Kay on the 25th of the month. Happily, Buckley was not to sever all connections with the squadron as a few months later he was placed in command of the base at Feltwell. Objectives for the Wellingtons during December included marshalling yards in **Berlin**, Charlottenberg and **Hamm**, the docks at **Bremen**, and targets in **Mannheim** and enemy-occupied territory. The squadron's biggest effort was made on the 6th when 13 Wellingtons operated, the principal targets being aerodromes in enemy-occupied territory.

There now came a definite change in the bombing policy. Instead of aircraft setting out to bomb a specific target, which often proved impossible to locate, it was decided to turn to area bombing. The first operation of this kind was mounted on the night of 16 December when a force of 134 aircraft was despatched by Bomber Command against **Mannheim**. Ten Wellingtons were sent by No. 75 Squadron, eight of which attacked, crews reporting many fires and explosions in the target area. Six nights later Pilot Officer Saxelby ¹ and his second pilot, Pilot Officer Hewitt, ² were returning from a further raid on **Mannheim** when a sudden change of wind occurred and the Wellington was carried southwards over very thick cloud. Astro-fixes were obtained and, under difficult flying conditions, the aircraft brought directly and safely back to base. The same night Pilot Officer Morton ³ was unable to find **Mannheim** because of thick cloud, so he selected an aerodrome near Rheims as an alternative target. The bombs started several fires among hangars and aircraft which could be seen in the light of the flames. Searchlights attempted to pick up the Wellington but illuminated instead a Messerschmitt which was flying just below and slightly ahead. Expecting an easy kill, Morton dived to attack but the front guns

¹ Squadron Leader C. K. Saxelby, DFC; **RAF**; born **Invercargill**, 27 Oct 1921; joined **RAF** Apr 1940; p.w. 7 Sep 1942.

² Flight Lieutenant L. R. Hewitt; Hastings; born **Opotiki**, 27 Jan 1913; insurance inspector; joined **RNZAF** Nov 1939.

³ Wing Commander J. E. S. Morton, DFC; **RAF**; born **Invercargill**, 11 Jun 1915; joined **RNZAF** Jun 1939; transferred **RAF** Jan 1940; Chief Training Instructor, No. 203 Group, **Middle East**, 1943–45.

jammed; the German pilot then switched off his lights and attacked the Wellington from the rear. Fortunately his shooting was inaccurate, and return fire from the Wellington drove him off with an engine beginning to spurt flames. From this raid one of the eleven Wellingtons despatched by No. 75 Squadron failed to return. A week later another Wellington was lost in the attack on the marshalling yards at **Hamm**.

There was a prolonged cold spell in the **United Kingdom** from January to April 1941, the snowfall being exceptionally heavy and the weather unusually stormy. This considerably restricted bombing operations, particularly in January and February, when No. 75 Squadron was only able to operate on seven nights in each month, releasing 48 tons and 49 tons of bombs respectively. In March, however, it was possible to send out aircraft on eleven occasions and the bomb tonnage was raised to over 81 tons. In these months the weather also seriously interfered with flying training, but every opportunity was taken to give new crews additional practice before they went on operations. New pilots flew as second pilots with experienced crews; untried crews were usually sent to coastal targets in enemy-occupied territory before they were allowed to tackle the longer and more dangerous flights into **Germany**. The most prominent target in January was Wilhelms- haven, which was attacked on three nights by a total of 16 aircraft. Other targets this month were **Bremen**, **Duisberg**, **Dusseldorf** and **Hanover** in **Germany**,

Turin in **Italy**, and the enemy-held ports of **Brest** and **Flushing**. **Cologne**, **Gelsen-kirchen**, **Hanover** and **Wilhelmshaven** were all subjected to single raids by squadron aircraft during February, along with dock areas in enemy-occupied territory, of which the most important were **Boulogne** and **Brest**, and oil storage tanks at **Rotterdam**. For March the principal target was **Cologne**, which was visited on three nights by a total of 24 aircraft. **Berlin** received two attacks and other objectives in **Germany** were **Bremen**, **Hamburg** and **Kiel**. Places occupied by the enemy came in for rather more attention than in the previous two months, the oil storage tanks at **Rotterdam** being bombed on two nights, while **Boulogne**, **Brest**, **Calais**, **Dun-kirk**, **Lorient** and **Ostend** were also attacked.

On operations during this period the most depressing factor crews had to face was the uncertainty about the conditions prevailing at base. The most difficult part of a flight frequently came at the end, when crews had been in the air for five or six hours and were tired and very cold. Over the North Sea crews often experienced treacherous weather, and if an aircraft had been damaged it was here that difficulties were most likely to develop, leading to a forced landing in the sea. When the aircraft reached England, too often it would be to find the countryside hidden under a blanket of fog. Typical determination in adverse weather was displayed by the crew of one of the Wellingtons sent to attack **Hanover** on the night of 26 January. When they took off visibility was down to 100 yards, cloud base was at 300 feet, and the aircraft had to climb through 6000 feet of ice-laden cloud. During the North Sea crossing the wireless set became useless but the captain, Flight Lieutenant Macfarlane,¹ decided to continue with his mission. The target was reached on astro-navigation and bombed successfully, although flak was so intense that the aircraft was thrown about in the air by the force of the bursts. On the return journey Macfarlane went down low so that his gunners could rake De Kooy airfield with machine-gun fire. He then flew his Wellington back to base without wireless aid and, in poor visibility, with cloud base of less than 500 feet, made a successful landing. The night of 11 January saw the squadron's first

attack against **Italy** when five Wellingtons, with crews specially selected for the task, set out to make the long and arduous flight to Turin. Three of the bombers, two flown by New Zealanders, Morton and Saxelby, and the third by an English captain, reached their objective and reported successful attacks in spite of cloud which 'twice obscured the target area just as the bombs were due for release'. All three aircraft returned safely to base after a trip which had taken ten hours. On the same night five other aircraft from the squadron flew to **Wilhelmshaven**, where the *Tirpitz* had been the target for six aircraft three nights earlier. There was thick cloud over the German port and strong opposition from flak, but all the bombers made attacks.

A menace against which the bomber crews had now to be constantly on their guard was the possibility of attack by enemy 'intruder' aircraft over England. Lurking in the vicinity of airfields or guide beacons, they waited to pounce upon the bombers as they returned from operations. At the end of a long and tiring flight, with danger from enemy defences and the elements over, it was natural that the aircrews should be tired and at times tempted to relax their watch. It was then that the intruders were able to take their toll. One night towards the end of February, a Wellington was circling the beacon at Marham on return from an attack against **Cologne**. Fortunately, the crew were still alert, and Flying Officer Brown,² the rear gunner, saw an aircraft approaching which he identified as hostile. He quickly gave directions to the captain,

¹ Squadron Leader M. H. Macfarlane, DFC and bar; North Canterbury; born Christchurch, 25 Oct 1916; joined **RNZAF** Jun 1939; transferred **RAF** Jan 1940; retransferred **RNZAF** Jul 1945.

² Flight Lieutenant W. D. Brown, DFC; **RNZAF**; **Ohakea**; born **Wanganui**, 12 Jan 1918; clerk; joined **RNZAF** Mar 1940.

who manoeuvred the Wellington so that fire from the enemy machine went beneath it. Brown replied with a long burst and tracer was seen to enter the fuselage of the German aircraft, which was driven off.

Even at the beginning of a flight, crews had to be alert and keep a careful watch. A favourite ruse of the enemy fighters was to patrol stretches of the English coast in the hope of intercepting bombers as they began their journey. On the night of the squadron's fourth attack on **Hamburg** early in May, one Wellington was attacked just after crossing the coast. The bomber was badly damaged and the rear gunner, Sergeant Gannaway, ¹ fatally wounded. Between January and March enemy aircraft also made periodical attacks on the squadron's base at Feltwell. However, the 'nuisance' raiders had little success; damage was comparatively slight, there were few casualties, and the airfield was kept in operation.

The heaviest raid by Bomber Command at this time was against **Hanover** on the night of 10 February when eleven Wellingtons from No. 75 Squadron formed part of the attacking force of 220 bombers. On this occasion crews were assisted by clear weather and moonlight, which enabled them to identify their target and deliver a heavy attack. Enemy defences were active, there was much light and heavy flak, fighters were out in force and dummy fires were used in an attempt to confuse the bombers. The Wellington captained by Flight Lieutenant Morton was attacked three times by night fighters during its return flight. The crew escaped injury but their machine fared badly. Cannon shells burst inside the bomb bay and punctured all the hydraulic fuel-pipe lines with the result that the bomb doors fell open and the undercarriage hung down, reducing speed and causing the bomber to lose height whenever evasive action was taken. Fortunately the attacks were not pressed home, and Morton was able to reach a base in East Anglia and crash-land without injury to his crew. On the night of 12 March three New Zealand Wellingtons flew in the force of 72 bombers which attacked **Berlin**. A vivid impression of this early raid on the German capital has been left by Sergeant Reid, ² who flew as second pilot in the Wellington captained by Hewitt. Reid was to lose his life four months later in an attack on **Essen**.

In the crew room men were dragging on fur-lined suits, sweaters, boots and parachute harnesses. The same stale wisecracks were flying. Three

dull, foggy days of sitting about had dulled conversation. No excitement in the lorry load of pilots, navigators, wireless 'ops' and gunners bound

¹ Sergeant E. F. Gannaway; born **Napier**, 21 Dec 1919; motor driver; joined **RNZAF** Jul 1940; died of wounds, 12 May 1941.

² Sergeant I. L. Reid; born Waikino, **Auckland**, 21 Aug 1917; journalist; joined **RNZAF** Dec 1939; killed on air operations, 3 Jul 1941.

for the dispersal points and scarcely a glance for the signal light winking overhead from the first machine as it set course for **Germany**. Our stumpy wireless-operator crawled underneath to write 'Love from **Sheffield**' on the biggest bomb. Final engine tests were reassuring. Torchlight showed the face of the ground crew corporal in the escape hatch to wish us luck. Airfield control signalled permission to take off; we wheeled and then plunged off down the flare path, tail high to gain speed. Bomb and petrol loads were heavy. We staggered off the ground, sagged slightly and then climbed ponderously in a slow circuit before turning on the route leading eastward to **Berlin**.

The placid night was soothing as we crossed the coast and climbed slowly towards the full moon. The engines surged and fell in their usual tuneless rumbling song. Beside me the captain, intent on the green phosphorescent figures of his instrument panels, and behind the dark tunnel of the fuselage with faint lights showing at the navigation and wireless cubicles. The black motionless dots which suddenly appeared below were the ships of a convoy and our captain flashed the identification light. Soon we were weaving our way through the searchlight batteries on the Dutch coast. Quick reports came from our gunners as we crept on steadily eastwards deep into the heart of **Germany**. The hours went by slowly as hills and valleys, lakes, ridges and railways passed underneath—all clearly white in the moonlight. Another alteration of course and **Berlin** lay ahead. As we swung in over the suburbs searchlights poked up on our left. In front was the heart of

the city traversed as yet by only a few searchlight beams. The navigator now lay sprawled with his target map ready to aim our bombs. Simultaneously with their release searchlights shot up unerringly and settled right upon us. Dirty grey balloons flashed past in the beams of light. Flak burst all around us and the hitherto cloudless sky was darkened with patchy smoke. We could smell the cordite. The bomber clawed upwards for a moment and then plunged down. A staggering side-slip, another stall turn and then the worst sensation of all as the engines completely cut out.... Then as suddenly as it had begun the flak ceased and we were plunging in comparative safety. A few seconds previously we were being passed across the city from cone to cone in an uplifting hail of shrapnel. We gulped coffee from the thermos flasks. Fragments of burning language from the relieved crew came over the intercom. Then silence as we began the long slog back. Our ears, blocked by the sudden changes of pressure, dulled the motors' roar to a thick hum. More lights. Flak bursting well away from us. Dancing will-o'-the-wisps on the ground and then again the silver sea. Onward to the English coast, a beach and overlapping waves. Over the airfield we found our undercarriage had been smashed. Reassuring voices from the ground as we turned in to crash land.... the fences, buildings, and flares rush past, there are tearing, splintering noises, crunching skid and a smell of fresh furrowed earth ripped up in our path. Silence and then a voice from outside inviting us to come out and have a smoke....

On flights into distant parts of [Germany](#) there was not a very wide margin between fuel capacity and consumption, and if difficulties were encountered crews would find that they were short of petrol. There were many circumstances which could bring this about. Sometimes aircraft were blown off course by unexpectedly strong winds or they lost their way, adding many miles to the distance covered. A petrol tank might be punctured by fighter action or by flak, and damage to the engines often increased the rate of consumption. In their anxiety to deliver an accurate attack crews would sometimes stay too long in the target area. Any one or, as often happened, a combination of these circumstances could put the aircraft in danger and cause the bomber to go down into

the sea or force a landing before base could be reached. Such an experience befell Macfarlane and his crew one night in January. During an attack on **Wilhelmshaven** he had made four runs over the target. Shrapnel damaged the Wellington's tanks and the starboard engine, so that after a difficult return flight a forced landing had to be made in open country. Although it was a very dark night, this was accomplished with little damage to the aircraft and no injury to the crew.

On the night of 18 March when No. 75 Squadron attacked **Kiel**, the weather was very bad. One Wellington from the squadron, in which Sergeant Mee ¹ was second pilot, lost its way in thick cloud during the return journey, and finally the petrol supply was exhausted. The crew baled out, but the wireless operator was killed when his parachute failed to open. Five days later, when the squadron bombed **Berlin**, the Wellington captained by Flight Lieutenant Gill ² was forced down low when over the city and held by a concentration of searchlights. The bomber was continually hit by flak, and when Gill finally succeeded in getting clear it was to find that he was some considerable distance to the east of **Berlin**. The navigator had lost his bearing, and it was only the pilot's fine airmanship which brought the aircraft back to base and narrowly avoided disaster as, on landing, the petrol tanks were found to be almost empty. March was an eventful month for Gill. On the night of the 12th his aircraft was attacked by a Junkers 88 during the outward journey to **Berlin**. His rear gunner opened fire at close range and the enemy fighter was seen to stall and dive towards the sea. In the engagement the Wellington was extensively damaged, the port petrol tank being holed and the elevator so shot away that the aircraft became hard to control, but the crew flew on and completed their mission. Before joining the New Zealand Bomber Squadron, Gill had flown Battle aircraft in **France**. By the end of July 1941 he was a veteran with 47 sorties to his credit.

The improvement in the weather, and the hard work of the ground crews in attaining a high standard of aircraft availability, were reflected in the squadron's performance during the second three

¹ Sergeant A. C. Mee; born Dunedin, 20 Nov 1917; clerk; joined **RNZAF** Feb 1940; killed on air operations, 7 May 1941.

² Group Captain T. F. Gill, DSO; **RNZAF**; **Wellington**; born **Wellington**, 31 Jan 1917; joined **RAF** Jun 1939; commanded No. 490 (NZ) Sqdn, **West Africa**, 1944–45; DCAS, **RNZAF**, 1953–.

months of 1941. In April 95 sorties were despatched and this figure was bettered by only three squadrons in No. 3 Group. **Berlin** and **Kiel** were each attacked on two occasions, other German targets being **Bremen** and **Mannheim**. **Brest** and oil storage tanks at **Rotterdam** were also raided on three and two nights respectively. In May No. 75 Squadron climbed to the top of the Group table with 114 sorties, 102 by night and twelve by day, 32 more than their nearest rivals. The squadron took part in four raids on **Hamburg**, **Cologne** was visited on two occasions, and other objectives in **Germany** were **Emden** and **Mannheim**; targets in enemy-occupied territory included **Brest** and Boulogne. The daylight sorties were sent out in an attempt to locate the German cruiser *Prinz Eugen* in the **Atlantic**. No. 75 Squadron maintained its position at the head of the Group table in June, when the total sorties rose to 128, ten more than the second squadron. **Dusseldorf** was the main target for this month, four attacks being made by a total of 28 squadron aircraft. **Cologne** was again the objective on two nights, while single raids were made on **Bremen**, **Hamm** and **Kiel**; 19 sorties were also despatched over enemy-occupied territory against Boulogne, **Brest** and **Dunkirk**.

Whenever **Berlin** was the target, crews could expect to encounter strong opposition. Pilot Officer Matheson ¹ and his crew distinguished themselves on the night of 9 April when nine aircraft from the squadron attacked the German capital. **Matheson** was instructed to bomb and to obtain photographs of Tempelhof aerodrome. On the bombing run, just after the first photograph had been taken, the **Wellington** was caught by a concentration of searchlights and had to pass through a heavy barrage of anti-aircraft fire. **Matheson** was forced to go down to 2000 feet over

the centre of the city before he was able to escape from the blinding glare of the searchlights, by which time the aircraft had been extensively damaged in the wings and fuselage. Before the bombs could be released he had to regain height and make another bombing run, but his determination was rewarded when the crew saw that their explosives had started large fires. On the same night Pilot Officer Simich ² was attacked by a fighter when over the Zuider Zee, and shortly afterwards had a short engagement with a Dornier near the Dutch coast. **Berlin** was not a strange target for Simich. Eight days later he was on his fourth trip to the city when, approaching the target area, he ran into a fierce barrage of light and heavy flak assisted by a group of searchlights on the outskirts. Several attempts

¹ Flight Lieutenant O. R. Matheson, DFC and bar; born **Hampstead, London**, 2 Aug 1916; joined **RAF** Sep 1939.

² Flight Lieutenant G. R. Simich, DFC; born **Auckland**, 3 Sep 1916; company secretary; joined **RNZAF** Nov 1939; p.w. 27 Jul 1942; killed in aircraft accident, 27 Aug 1948.

to run into the target were thwarted by the strength of the opposition and the aircraft was forced so low that Simich had to turn away. Nevertheless he tried again, identified the aiming point and completed a successful bombing run. Another target well known to the crews of the squadron was **Hamburg** which, as an important port and industrial area, was well protected. On the night of 6 May 13 crews from No. 75 Squadron bombed the city as part of a force of 118 aircraft. It was on this raid, after escaping from the **Hamburg** defences, that the Wellington flown by Sergeant Nola ¹ struck a balloon barrage cable at the mouth of the River Humber and crashed into the sea. The same week 23 sorties were flown by the New Zealand Bomber Squadron in two further attacks on **Hamburg**. All the Wellingtons returned without major damage, but on each occasion crews reported having to make their way through heavy anti-aircraft fire and strong concentrations of

searchlights.

Towards the middle of June a further change in bombing policy was introduced. Targets, some already well known to crews of No. 75 Squadron, were now selected principally for their close association with the German transportation system. One of the first attacks was against **Hamm**, the most important and largest railway centre in **Germany**. Its marshalling yards, which had been a frequent target in 1940, were attacked on 12 June by a force of 82 bombers, including eleven from the squadron. One New Zealand Wellington, flown by an English captain, Pilot Officer Curry, ² was attacked by three fighters, one of which was claimed as destroyed. The same night Pilot Officer Hobbs ³ also reported an engagement in which the enemy aircraft was damaged.

During an attack on **Dusseldorf** on the night of 11 June, Squadron Leader Lucas, one of the squadron's flight commanders, turned back over the target after bombing to take a photograph. On this run his Wellington received a direct hit. One engine was damaged, the undercarriage hung down and the bomb doors refused to close, with the result that on the long return flight the bomber steadily lost height. It crossed the English coast at 500 feet with petrol gauges showing almost empty and was diverted to land at another airfield; just as it rolled off the flare path, the engines cut out. Pilot Officer Thomson ⁴ and his crew had a harrowing experience in

¹ Sergeant D. L. Nola; born **Ruawai, North Auckland**, 1 Jul 1914; Government auditor; joined **RNZAF** Oct 1939; killed on air operations, 7 May 1941.

² Wing Commander G. W. Curry, DSO and bar, DFC and bar; born Newcastle-on-Tyne, 5 Apr 1920; joined **RAF** Sep 1939; commanded No. 627 Sqdn, 1944–45 and No. 96 Sqdn, 1945; killed in flying accident, 18 Sep 1948.

³ Squadron Leader A. M. Hobbs, DFC; born **Christchurch**, 7 Jun 1918; insurance clerk; joined **RNZAF** Jan 1940; killed on air

operations, 25 Jun 1943.

⁴ Flying Officer J. W. Thomson, DFC; born **Oamaru**, 7 Aug 1916; civil servant; joined **RNZAF** Feb 1940; killed in action, 19 Jan 1942.

another attack on the same target a few nights later. After the target had been bombed the Wellington was twice caught and held by a cone of searchlights. Intense anti-aircraft fire was directed at the aircraft and one burst turned it over on its back and sent it hurtling down in a steep dive. Thomson blacked out for a few moments but recovered in time to pull his machine out of the dive and climb again to a safe height. Then, 25 miles north-east of Antwerp, the bomber was again picked up by searchlights and engaged by the ground defences. Suddenly the anti-aircraft fire stopped to make way for a Junkers 88 which riddled the Wellington with machine-gun and cannon fire. The rear gunner replied and the enemy machine turned sharply away and disappeared. Meanwhile a fire had broken out in the bomber, but it was soon extinguished by the crew. On seeing the flames the second pilot, Sergeant Allen, ¹ went to assist:

Suddenly I found myself half out of the aircraft. I had slipped through the mid under-hatch, for the cover had been blown out by blast. I hadn't got on my parachute, and for a few moments, which seemed like years, I clung on, half in and half out the aircraft, which was in a screaming dive to escape from the fighter. Frankly, I don't remember how I got back. I just clawed at everything and finally got inside again.

June the 24th was an eventful day in the squadron's history. His Royal Highness the Duke of **Kent**—he was killed 14 months later flying to **Iceland**—visited the station and during the evening met a number of New Zealand crews, afterwards watching them take off on the night's operations. Thirty-two bombers from Feltwell were despatched to attack **Kiel** and **Dusseldorf**. The New Zealand Squadron sent 18 aircraft, ten of which were ordered to bomb **Kiel** and the other eight **Dusseldorf**. This

was a record number of sorties for No. 75 Squadron at this time and all but two crews reported bombs dropped on their objectives.

On the last night in June, when the squadron sent eleven bombers to attack **Cologne**, Flying Officer Prichard ² and his crew had an eventful flight. When 35 miles from the target and on the edge of a searchlight belt, their Wellington was attacked by a Junkers 88 at close range. A cannon shell hit the starboard engine. The bomb doors were blown open and both front and rear turrets damaged. Although his machine was now defenceless and incapable of effective evasive action, Prichard carried on with his mission, penetrated the city's main defensive zone and dropped his bombs in the target area. He then managed to keep the bomber airborne and got it back to base, where a crash-landing was made. This

¹ Pilot Officer R. N. Allen, DFM; born Dunedin, 14 May 1918; civil servant; joined **RNZAF** May 1940; killed in flying accident, 30 Jan 1942.

² Wing Commander D. L. Prichard, DSO; **RAF**; born **Dannevirke**, 15 Nov 1916; joined **RAF** Aug 1939.

was Prichard's fiftieth sortie. He had begun operations flying with Battles in **France** and had afterwards flown with Coastal Command before joining No. 75 Squadron.

The squadron's achievements in June brought congratulations from Air Vice-Marshal Baldwin, ¹ Air Officer Commanding No. 3 Group:

Will you please congratulate the C.O. and maintenance personnel of No. 75 (N.Z.) Squadron on their exceptional record of serviceability and operational effort during this month.

The following days must be a record for the unit:—on 18th June, 16 aircraft out of a strength of 16; 21st June, 17 aircraft out of a strength of 17; 24th June, 18 aircraft out of a strength of 18.

As is only to be expected, I note No. 75 (N.Z.) Squadron tops the serviceability list of the squadrons in the Group. Such an exceptional standard can only be achieved by the competence and enthusiastic effort of the ground staff ably backed by good engine manipulation by pilots and captains, and also in no small degree to the operational skill of the crews who have carried out their missions without sustaining any major damage to their aircraft.

With the launching of the German attack on **Russia**, the newly begun offensive on transportation and morale assumed additional importance for it was considered that the concentration of air attack on communication centres would prove of direct assistance to the Russians. From the beginning of July until the end of the year, No. 75 Squadron was to take a full share in this important task and win further distinction, although in contrast to the good fortune enjoyed in previous months, there were to be heavier losses. Altogether 14 Wellingtons were lost during the period, including one which crashed into the sea off Corton Beach, another near Coltishall, a third which crash-landed in Brandon Woods, and two others whose crews were forced to bale out after arriving back over the **United Kingdom**.

Certainly it was a period of intensive effort. In the three months from July to September 1941, 312 sorties were despatched in attacks which included such distant targets as **Berlin**, Genoa, and Stettin.

The main transportation target during July was **Munster**, which Bomber Command attacked on four consecutive nights. Thirteen aircraft were sent by the New Zealand Squadron on the night of the 5th, twelve on the 7th, and seven on the 8th. On these 32 sorties all but two crews reported they had attacked. On the first

¹ Air Marshal Sir John E. A. Baldwin, KBE, CB, DSO, Order of the Crown and Croix de Guerre (Bel), Order of the White Lion (Czech), Air Medal (US); **RAF** (retd); born **Halifax, Yorkshire**, 13 Apr 1892; joined 8th Hussars 1911; seconded RFC 1915 and **RAF** 1918; permanent commission **RAF** 1919; AOC No. 3 Bomber

two occasions crews found excellent visibility over the target, and photographs were obtained which showed hitherto unparalleled results.

It was while returning from the second raid on **Munster** that Sergeant Ward, ¹ by a particularly gallant action, gained the Victoria Cross—the first of three such awards won by New Zealanders for outstanding valour in air operations during the Second World War. Ward was flying as second pilot in the Wellington captained by Squadron Leader Widdowson ² of Winnipeg. The other members of the crew were Sergeant Lawton, **RNZAF**, ³ navigator; Sergeant Mason, **RAF**, ⁴ wireless operator; Sergeant Evans, **RAF**, ⁵ front gunner, and Sergeant Box, **RNZAF**, ⁶ rear gunner. The Wellington had bombed its target and was over the Zuider Zee on the return flight when it was attacked by a Messerschmitt 110 and the front gunner wounded. Box, however, got in a burst from point-blank range and the fighter was last seen diving towards the sea with its engines on fire. But during the attack the bomber had been hit by cannon shells and incendiary bullets which set the wing on fire near the starboard engine, and the flames, fed by petrol escaping from a broken pipe, soon threatened to engulf the entire wing. Using an axe, the crew broke a hole in the fuselage in order to bring their extinguishers into play, but the blaze was too far away for their efforts to make any impression. They even tried pouring coffee from their vacuum flasks along the wing, but without effect. Ward then proposed that he should get out on the wing and smother the fire with an engine cover which had been serving as a cushion. He intended leaving his parachute behind but was persuaded to take it with him. A rope from the aircraft dinghy was then tied to him and, with help from Lawton, he climbed through the narrow astro-hatch and put on his parachute. Then he kicked holes down the side of the fuselage to gain a foothold and, after the wind had several times lifted him up and thrown him back, eventually managed to get down flat on the wing with his feet well dug in. ‘It was just a matter of getting something to hang on to,’ he

said afterwards.' It was like being in a terrific gale only

¹ Sergeant J. A. Ward, VC; born **Wanganui**, 14 Jun 1919; school teacher; joined **RNZAF** Jul 1940; killed on air operations, 15 Sep 1941.

² Wing Commander R. P. Widdowson, DFC; born Winnipeg, 7 Jun 1915; joined **RAF** 1934; Deputy Station Commander, RAF Station, Hemswell, 1942; liaison duties with Italian Air Force, 1943–44.

³ Flight Lieutenant L. A. Lawton, AFC; **Auckland**; born **Wellington**, 25 May 1919; clerk; joined **RNZAF** Dec 1939.

⁴ Flying Officer W. H. Mason; born Stanford, Lincolnshire, 30 Jan 1918; joined **RAF** Jan 1940.

⁵ Sergeant D. H. V. Evans; born Llanelly, Carmarthen, 16 May 1920; joined **RAF** Nov 1939.

⁶ Pilot Officer A. R. J. Box, DFM; **Auckland**; born Otahuhu, **Auckland**, 8 Nov 1921; apprentice engineer; joined **RNZAF** May 1940.

worse than any gale I've ever known.' For as he worked his way along the wing he came behind the airscrew and was in the slipstream as well. Taking the engine cover from beneath him, Ward now tried to push it down through the hole and onto the leaking pipe from which the fire was coming. But the wind kept lifting him up and the cover nearly dragged him off. However, he tried again and finally was able to stuff the cover down into the hole, only to see the wind blow it out and whisk it away before he could seize it. After that there was nothing to do but get back. This was worse than going out as Ward was now almost exhausted. The navigator kept a strain on the rope as he slowly pulled himself back along the wing and up the side of the fuselage to the astro-hatch, where

Lawton finally dragged him in.

There was now little danger of the fire spreading further and it finally burnt itself out. Just before the Wellington reached base, some petrol which had collected in the wing flared up but only for a few moments. Widdowson, who had flown the aircraft with exceptional skill and made a safe landing, adds in this report, 'Lawton also did a very fine job in navigating us back to base solely by astro-navigation as the radio was destroyed during the attack. In fact the aircraft was so badly damaged that it never flew again.' Box, in addition to destroying the enemy aircraft, had remained at his post although, with the intercommunication system shot away, he was isolated from the rest of the crew.

Duisberg, situated inland on the Rhine with its three large marshalling yards at Hochfeld, Hochfeld-Sud and Ruhrort, was the largest rail-water transshipment port in **Europe**. It was attacked on the night of 15 July, when nine Wellingtons from No. 75 Squadron were among a force of 38 aircraft despatched. Although it was cloudy over the target, searchlights, guns and night fighters were able to co-operate effectively and only 19 aircraft claimed attacks, of which eight were from the New Zealand Squadron. The Wellington captained by Pilot Officer Rees, ¹ of Seaham, **Durham**, had bombed and was near Roermond when it was caught in a cone of searchlights and damaged by flak. Then, almost immediately, a night fighter attacked. Machine-gun bullets and cannon shells struck the aircraft, and one shell, bursting in the cockpit, blew open the mid-underturret hatch. The second pilot, Sergeant Joyce, ² was killed instantly and the front gunner wounded so seriously that he subsequently died in hospital. The rear gunner

¹ Squadron Leader W. J. Rees, DFC and bar; born Seaham, **Durham**, 21 May 1920; joined **RAF** Sep 1939.

² Sergeant D. C. Joyce; born **Bristol**, Gloucestershire, 25 Jan 1919; clerk; joined **RNZAF** May 1940; killed on air operations, 16

Jul 1941.

was temporarily blinded by a shell splinter and the navigator, hurrying to give him assistance, stepped through the open hatch. By good fortune he had donned his parachute and was taken prisoner. Sergeant Lewis, ¹ the wireless operator, was shocked and deafened by the explosion of a shell close to his head, so that for a time Rees was virtually alone and had to fly the aircraft without help from his crew. Eventually Lewis recovered and was able to give first aid to the wounded. Then, after repairing his wireless set, he collected the navigator's maps and instruments and assisted Rees to set course for base, which was reached safely. On the same night the Wellington captained by Sergeant Fotheringham ² landed in the North Sea about sixty miles from the English coast. An SOS message was received before the aircraft went down and air rescue searches began immediately. But although an empty dinghy was sighted, none of the crew was rescued. These losses were countered by the destruction of a night fighter by a New Zealand gunner flying with No. 57 Squadron from Feltwell. His Wellington was on its way back over **Holland** when a Messerschmitt suddenly came in from the rear and opened fire. The gunner, Sergeant F. C. Sargent, held his fire until he could see the enemy clearly and then replied with a long burst. It found its mark. The Messerschmitt fell away and dived into the ground, where it exploded in a sheet of flame. The victory was confirmed by the crew of another bomber flying in company.

Three other communication centres were attacked in July. They were **Bremen**, **Cologne** and **Mannheim**, of which the first and last were also Battle of the **Atlantic** targets. The squadron's last operation of this month was also against a Battle of the **Atlantic** target—the Deutsche-Werke submarine and shipbuilding yards at **Kiel** which were attacked on the night of the 24th.

Of the 13 raids in which the New Zealand Squadron took part during August, eight were directed against targets in **Germany**, with **Hanover** as the main objective. In three visits to this city 28 aircraft claimed

successful sorties. **Mannheim** was bombed early in the month and again towards the end, while other targets for the Wellingtons included **Cologne**, **Duisberg** and **Hamburg**, all of which were closely linked with the German transport system. In enemy-occupied territory, Boulogne, Calais, **Dunkirk**, Le Havre, and Ostend were also attacked.

There were a number of incidents during these raids. On the night of 3 August one of the Wellingtons bound for **Hanover** was

¹ Flying Officer I. W. Lewis, DFM; born Dudley, Worcestershire, 12 Sep 1917; joined **RAF** Feb 1940.

² Sergeant R. E. E. Fotheringham; born **Auckland**, 8 Dec 1911; clerk; joined **RNZAF** Dec 1939; killed on air operations, 16 Jul 1941.

intercepted by an enemy fighter about twenty miles west of Lingen in **Holland**. The bomber was badly damaged but the pilot brought it back and made a safe landing at Newmarket. Another Wellington was flying towards **Hamburg** on the night of 8 August when it was engaged by an unidentified fighter. To make good his escape, the pilot jettisoned his bombs over the Westerhaven area. A third crew, among those detailed to attack **Mannheim** on the 29th, had an encounter with a Messerschmitt 110 which was claimed as destroyed. Their Wellington, however, suffered considerable damage and, on landing back at base, it overshot the runway and crashed. The crew escaped injury. During this same raid another crew flew a large part of the return journey with their port engine on fire. On the night of the 6th one Wellington was hit by flak over **Mannheim**. During the homeward flight the oxygen supply was exhausted and for a time three members of the crew, including the navigator, were unconscious. Despite these difficulties the captain, Sergeant Breckon, ¹ flew his machine back to England and landed safely at Manston. A few nights later the crew of the Wellington captained by Pilot Officer Roberts, ² of **Brisbane**, had a harrowing experience. They had attacked **Hanover** and were over the Zuider Zee on the return flight

when, as Roberts afterwards related:

Without warning I saw a stream of tracer going past the fuselage between the starboard motor and the cockpit. The whole plane seemed to shudder under the impact of the striking bullets and cannon shells. Tried to turn sharply to port, but found that I could get no response from aileron control, so immediately dived. However the gunner was able to get a good burst into our attacker, and as we dived, the Me. went overhead and was last seen diving steeply away to starboard. I pulled out of the dive at about 10,000 feet, and with the strong odour of petrol in my nostrils, tried to collect my scattered wits. The first thing I noticed was that the airspeed indicator was not registering, and the second pilot who was standing in the astro-dome, reported that petrol was leaking from one of the pipes inside the kite. The wireless operator said that several bullets had entered his cabin, and made our wireless receiver unserviceable; the rear gunner also reported petrol flying past his turret in the slipstream from the starboard motor. Then looking out of the side windows I could see that the undercarriage was hanging down and the bomb doors were opened. A bullet had pierced the main hydraulic pipe, and so I knew that if we did reach England we would have to crash-land without flaps.

Our dinghy had been released during the attack and was lying punctured on the starboard wing. About fifteen minutes later, as we were crossing the Dutch coast, I again checked the petrol, and it seemed that we would have sufficient to take us across the North Sea, so I finally decided to carry on for home. Luck was with us and we did get safely across the water. I

¹ Flight Lieutenant I. O. Breckon, DFC and bar; **RAF**; born **Auckland**, 6 Jan 1916; warehouseman; joined **RNZAF** Apr 1940; transferred **RAF** Aug 1947.

² Flight Lieutenant H. A. Roberts, DFC; born **Brisbane**, 10 Jan 1919; joined **RAAF** May 1940.

tried to gain more height in case my petrol should suddenly run out. It did, though the engines fired spasmodically for the next few seconds, and I immediately ordered the crew to abandon the aircraft.

Everything was strangely quiet after the boys had gone, and I muttered a quiet prayer for something soft to land the kite on. All I could do at the moment was to keep the plane going down in something like a glide, but without an air-speed indicator I could not tell how sharply I was approaching the ground. At 500 feet I switched on the landing light, and below me I saw what I took to be a roadway, which seemed to me to be running more or less in the same direction as I was landing. I kept along the track, and in less time than it takes to tell I felt the starboard wing brushing over the tops of the wood which flanked each side of the roadway. In the next instant the plane swung sharply to the right and with a rather drawn-out crash, it came to a stop.

September was to bring a change in command of the squadron when Wing Commander Sawrey-Cookson, ¹ an Englishman with a distinguished career in the **RAF**, relieved Wing Commander Kay at the beginning of the month. Under its new leader, No. 75 Squadron operated on twelve nights in September, the objectives being widely distributed, from **Hamburg** in the north to Stettin in the east and Genoa in **Italy**. Three visits were made to **Frankfurt**, two to **Hamburg**, and single raids were flown against **Berlin**, **Emden**, Huls, **Karlsruhe**, **Kassel**, **Kiel**, Stettin, Boulogne, **Brest**, Ostend and Genoa.

One of the night bombing successes of the autumn of 1941 was the raid against **Kassel** on 8 September, when the Henschel railway locomotive works and the Mittelfeld rail junction were the main targets. The attack was made in moonlight and there was little cloud or haze. **Kassel** was not heavily defended by flak and German night fighters had a profitless night, the bombers returning without loss. Of the 95 bombers which took off from England, 74 claimed they had attacked. The contribution of the New Zealand Squadron was ten aircraft, of which nine bombed **Kassel** and the other an alternative target. When daylight

photographs were obtained a few days later it was seen that the main railway station had been hit and other railway buildings damaged, with further destruction to the east of the station.

On the night of 15 September **Hamburg** was the destination for a force of 159 aircraft which included twelve Wellingtons from No. 75 Squadron. It was an unhappy night, as Sergeant J. A. Ward, VC, was lost on this his second sortie as a bomber captain. Over the target his Wellington was caught by searchlights and, despite strenuous attempts to escape, was held and hit by flak. Fire broke

¹ Wing Commander R. Sawrey-Cookson, DSO, DFC; born Radwell, Hertfordshire, 20 Dec 1914; joined **RAF** 1937; commanded No. 75 (NZ) Sqdn, 1941–42; killed on air operations, 6 Apr 1942.

out and spread rapidly. Ward ordered the crew to bale out and was last seen still at the controls. He went down with the aircraft to his death. A second Wellington, captained by Sergeant Hawkins, ¹ was also lost on this raid.

The weather was so bad on the night of 21 September that a general recall signal was sent out, but this was not received by some crews and squadron aircraft bombed several targets, including their primary objectives in **Berlin**, **Frankfurt** and Ostend. A few nights later, five aircraft from the New Zealand Squadron were among the 34 Wellingtons which set out for Genoa, but the bombers had again to be recalled owing to deterioration in the weather at their bases. On the 28th, when six crews took part in another attempt to reach the same target, they encountered much cloud along their route and over the city. Nevertheless five attacks were reported after a flight of almost ten hours involving a double crossing of the Alps. One captain afterwards reported:

Going out it was moonlight and we saw the coast, but as we neared the Alps the clouds began to build up and we had to skirt a heavy electrical storm. There were two layers of cloud over Genoa itself and we

had great difficulty in finding the docks as there was also considerable ground haze. We saw nothing of the Alps on the return journey. In fact, until we got back, we only had one brief glimpse of the ground.

On the last night of the month, when six New Zealand Wellingtons were sent to Stettin as part of a force of 40 bombers, there was clear weather and a half moon. The Wellingtons dropped their bombs and completed the long flight without incident.

During the last three months of 1941, the onset of the northern winter had a marked effect on the scale of the **Royal Air Force** bombing offensive. In October operations were possible on only 17 nights, No. 75 Squadron sending a total of 81 aircraft on ten of these occasions, when the emphasis was again on transportation targets at **Cologne, Bremen, Nuremberg, Dusseldorf, Emden** and **Hamburg**. Indifferent weather in November reduced the number of nights on which operations were practicable, but the squadron provided a total of 88 sorties on nine nights. **Emden** was attacked three times, **Essen** and **Ostend** twice, while single raids were mounted against **Berlin, Hamburg, Kiel, Brest, Dunkirk** and **Le Havre**. On 21 nights during December operations were either not contemplated or had to be cancelled. No. 75 Squadron despatched aircraft on six nights, when the enemy battleships at **Brest** were the principal objective, with a few sorties against **Le Havre**. The only raid on a German target was against **Dusseldorf**.

¹ Sergeant A. H. R. Hawkins; born **Sydney, NSW**, 2 Jan 1921; farmer; joined **RNZAF** Apr 1940; killed on air operations, 15 Sep 1941.

The outstanding feature of these months was the heavier casualties which the squadron experienced. During October six aircraft were lost over **Germany** and three others crash-landed on return. Two more Wellingtons were lost in the raid on **Berlin** on 7 November, and the following night three squadron aircraft were among those which failed to return from the attack on **Essen**. A further loss was sustained on the

last night of the month when one Wellington failed to return from the attack on **Hamburg**.

On the night of 22 October crews flew through several violent electrical storms to deliver their attack on **Mannheim**. Four nights later, when the squadron went to **Emden**, many bombers had difficulty regaining their bases, a sudden change in the wind blowing them off course. On the ill-fated trip to **Berlin** on 7 November, the weather was very bad on both the outward and homeward flights. The city was hidden below a layer of thick cloud and only a comparatively small proportion of the force succeeded in dropping their bombs. But conditions were more favourable on the last night of November, when the squadron sent ten Wellingtons to **Hamburg** as part of a force of 181 bombers. Clear skies and good visibility enabled crews to identify the railway yards which were the main target.

In addition to these raids on **Germany** and **Italy**, the squadron made a substantial contribution to the repeated attacks that were made at this time on French ports, in particular those directed against **Brest**. The German battle-cruisers *Scharnhorst* and *Gneisenau* had reached this port in March 1941 and were joined by the *Prinz Eugen* at the beginning of June. Against these vessels Bomber Command had despatched intermittent raids during the year, and aircraft from No. 75 Squadron flew on one daylight and 13 night attacks.

The first attack in which the squadron was engaged after the arrival of the *Scharnhorst* and *Gneisenau* took place on the night of 3 April, when eight out of the nine aircraft despatched made attacks. The Wellington captained by Flying Officer Prichard had bombed and was on the way back to base, when his rear gunner, Flying Officer W. D. Brown, saw that the bomber was being shadowed by a Messerschmitt 110. When first sighted the enemy fighter was flying about 300 feet astern and below the Wellington, but it quickly climbed to attack. Skilful manoeuvring by Prichard enabled Brown to fire three short bursts. Tracer was seen entering the fuselage of the fighter and it went into a loop before going down to hit the sea in a dull red glow. This success was

confirmed by the crew of another bomber flying nearby. Unfortunately, with the English coast only a short distance away, the Wellington collided with a **Blenheim**, which crashed and was totally destroyed. The Wellington remained airborne but also fared badly. 'The port wing was buckled and the leading edge smashed in to a depth of about two feet. Half the port elevator was ripped away, the remaining portion being torn out of its bearings but still attached to the control rod. The underneath portion of the rear turret also suffered damage.' Prichard nevertheless managed to retain control and make a safe landing.

On the night of 18 June, when 14 crews from No. 75 Squadron attacked the *Scharnhorst*, they were hampered by haze, patches of cloud, and by the smoke screen which was used by the enemy to cover the port. Intent on pressing home his attack, Pilot Officer Ashworth ¹ showed great determination and resourcefulness in spending over an hour in the target area during which time he made eight surveying runs, some at very low level. Eventually, in the face of intense opposition from flak, Ashworth succeeded in dropping flares immediately north and south of the target, which enabled him to make a final run exactly over the warship.

For Bomber Command's heavy daylight raid against **Brest** on 24 July, the contingent from Feltwell consisted of twelve aircraft, Nos. 57 and 75 Squadrons each sending six Wellingtons. New Zealand captains were Squadron Leaders Freeman and Lucas, Pilot Officer Ashworth, and Sergeants Breckon, Stanford and Streeter. ² Their target was the *Gneisenau* and the crews were briefed by Freeman, who led the formation. The bombers took off shortly before midday and flew westwards over **Devon** and **Cornwall** until just beyond the Scilly Isles, where they turned south towards **Brest**.

'At first all went smoothly and we approached the French coast in a clear sky,' writes one of the senior captains from the New Zealand Squadron. 'On we went in a very tight formation, now in vics of three in line astern. Ahead of us we could see small groups of bombers beginning

their runs over the target. Then suddenly it seemed as if all hell was let loose, with the crack of exploding shells and the sky filled with ominous black puffs. We aimed our bombs together with the rest of the Wellingtons before turning away still in formation.'

But unfortunately at this stage the bomber captained by Sergeant Streeter began to lag behind. It had been hit by flak and, with the undercarriage down and the bomb doors open, it lost speed. As the Wellington fell out of formation, it gave waiting fighters an opportunity to close in. Other squadron aircraft had seen its plight and had slowed down in the hope that it would regain formation, then as it was engaged they gave covering fire. Streeter's gunners

¹ Squadron Leader A. Ashworth, DSO, DFC and bar; England; born **Gisborne**, 3 May 1920; draughtsman; joined **RNZAF** Sep 1939; transferred **RAF** Jun 1940; Air Staff, **Pathfinder Force**, 1942–43.

² Sergeant D. F. Streeter; born **Wellington**, 5 Jun 1917; insurance clerk; joined **RNZAF** Apr 1940; killed on air operations, 24 Jul 1941.

destroyed the first enemy machine—a Messerschmitt 110—but the second—a Messerschmitt 109—sent the bomber spinning down. This loss to the squadron was not to go unavenged. As the fighter came out of the attack, it came under fire from Lucas's Wellington and was itself destroyed. Meanwhile the bomber captained by Breckon had been attacked by a fighter. One burst tore a large hole in the fuselage but the rear gunner, Sergeant Corrin, ¹ got in an effective reply which sent the enemy machine down towards the sea with smoke pouring from it.

At night the warships at **Brest** were a difficult target, and although the bomber crews did their best, circumstances combined to prevent them from inflicting decisive damage. On most nights it was necessary to use reconnaissance flares which were not altogether satisfactory. The

bomber had first to fly across the port and drop a flare to illuminate the dock area for identification and bomb aiming. Then, when the pilot succeeded in locating his target, he had to get his machine round again for a bombing run while the flare was still alight. Balloons, searchlights, smoke and anti-aircraft fire did not make this any easier. Another adverse factor was that the 500-pound bombs usually employed in these attacks had to be dropped from a height of about 8000 feet to attain sufficient velocity to pierce the thick deck armour of the German ships. This meant that, having been fortunate enough to locate his target at a lower altitude, the pilot then had to climb his machine to that height before bombing.

No. 75 Squadron's main night effort was made towards the close of the year when there were signs that the ships were preparing to break out of port. Thirty-three sorties were detailed to attack during December and 4000-pound bombs were dropped on four of the five raids. When returning on the night of 23 December, one aircraft crashed near Berners Heath and the captain, Flight Sergeant Bentley,² was killed. Four nights later the members of a crew which baled out near Buckfastleigh were fortunate to escape without injury. Although the raids in which the New Zealand Squadron operated did not inflict decisive damage on the enemy ships, their confinement to port during the year was a major contribution to the Battle of the [Atlantic](#).

The close of the year saw the squadron partially withdrawn from operations to re-equip with a new type of Wellington which was faster and of longer range. However, the conversion period was not one of inactivity. Delivery was taken of the new machines

¹ Pilot Officer H. R. Corrin, DFM; [Auckland](#); born Altrincham, Cheshire, 14 Jun 1921; mail carrier; joined [RNZAF](#) May 1940.

² Flight Sergeant L. L. Bentley; born [Te Kuiti](#), 6 Dec 1913; driver; joined [RNZAF](#) Oct 1940; killed on air operations, 23 Dec

1941.

while the old, which had served the squadron so well, were despatched to various destinations. Training with the new aircraft for both air and ground crews proceeded as quickly as the delivery rate and winter weather allowed. By the beginning of March 1942, when the bombing offensive against **Germany** was renewed on a heavier scale, No. 75 Squadron was ready to take its place among the leading squadrons of No 3 Group and win further distinction for its operational efficiency.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 10 – INCREASING NEW ZEALAND PARTICIPATION— FORMATION OF NOS. 485, 488, AND 489 SQUADRONS

CHAPTER 10

Increasing New Zealand Participation— Formation of Nos. 485,488, and 489 Squadrons

AT the end of 1940 the **Royal Air Force** was confronted with a grave shortage of personnel. Fighter Command, whose losses had been heavy, needed strengthening against the reasonable expectation that **Germany** would resume the daylight attack against **Britain** in the following spring. **Coastal Command**'s responsibilities had widened with the passing of the French coast under German control and the growth of the U-boat threat to British sea communications. At the same time Bomber Command's offensive against **Germany** was limited by the smallness of its first-line strength, while in the Middle East British air power was in urgent need of reinforcement. On all sides the demand for trained aircrew, particularly pilots, was urgent.

Along with the other nations of the Commonwealth, New Zealand was able to make a significant contribution towards meeting this demand, and the second year of war saw a rapid increase in the number of men sent from the Dominion. By September 1941 the total who had reached the **Royal Air Force**, including those serving at the outbreak of war, was 3230, a figure which represented a threefold increase over the previous year. The large majority of the new arrivals were Royal New Zealand Air Force personnel who had received their initial training in the Dominion, but individual New Zealanders had also enlisted in **Britain** and in other parts of the Commonwealth. Although aircrew predominated, the total included 350 men trained in New Zealand for duties as wireless operators, radio mechanics and fitter-armourers. Some of these technicians joined the New Zealand squadrons but, as with the aircrew, most became scattered among **Royal Air Force** units in the **United Kingdom** and the **Middle East** and later in **India** and **Burma**.

This relatively large contribution at an early stage of the war was the result of the direction of practically the whole air effort in the Dominion to the maximum output of trained men for service overseas

and, in spite of limited resources in aircraft and equipment together with a shortage of instructors, the obligations accepted under the Empire Air Training Plan in December 1939 had been exceeded. This was no mean achievement, since it was not until April 1937 that the Royal New Zealand Air Force had been established as a separate branch of the defence forces of the Dominion. It then had a strength of only 21 officers and 157 airmen. Considerable reorganisation and expansion followed, much of the success of which was due to the work of three Royal Air Force officers who, as Air Vice-M Marshals, successively held the appointment of Chief of the Air Staff in New Zealand—Air Marshal Cochrane,¹ Air Chief Marshal Saunders,² and Air Marshal Goddard.³ They were assisted by other **Royal Air Force** officers in various technical branches. Several New Zealanders who had completed short-service commissions with the **Royal Air Force**, notably Air Commodores Kay, Olson, and Wallingford and Group Captain Cohen,⁴ were also prominent among those who had helped to build up the air force in New Zealand during the pre-war years.

It was in June 1937 that New Zealand first began to train men for the **RAF**. During the next two and a half years 133 pilots were sent to England under various schemes; some of them joined fighter squadrons, others went to Bomber or Coastal Commands, but almost all had reached front-line units when the Battle of **Britain** began. Meanwhile a much more ambitious venture—the Empire Air Training Plan—had been started. Since this was to prove the main source of New Zealand's contribution to the Allied air effort, its origin and development deserve brief mention.

The first definite proposals for the Empire Air Training Plan

¹ Air Chief Marshal the Hon Sir Ralph Cochrane, GBE, KCB, AFC; **RAF** (retd); born Cults, Fife, 24 Feb 1895; joined RN 1912; transferred RNAS 1915 and **RAF** 1918; permanent commission **RAF** 1919; Chief of Air Staff, **RNZAF**, 1936–39; DDI, Air Ministry, 1939; commanded RAF Station, Abingdon, 1939–40; SASO, No. 6 Bomber Group, 1940; AOC No. 7 Bomber Group, 1940; DFT, **Air**

Ministry, 1940–42; AOC No. 3 Bomber Group, 1942–43; AOC No. 5 Bomber Group, 1943–45; AOC-in-C, RAF Transport Command, 1945–47; AOC **Flying Training Command, 1947–50; Vice-Chief of Air Staff, 1950–52.**

² **Air Chief Marshal Sir Hugh W. L. Saunders, KCB, KBE, MC, DFC, MM, Order of Polonia Restituta (Pol), Legion of Merit (US); **RAF**; born Johannesburg, 24 Aug 1894; joined South African Army 1914; transferred RFC 1917; **RAF** 1918; permanent commission **RAF** 1919; Chief of Air Staff RNZAF, 1939–41; AOC No. 11 Fighter Group, **RAF**, 1942–44; Director-General of Personnel, **Air Ministry**, 1944–45; AOC Air HQ, **Burma**, 1945–46; AOC-in-C, Bomber Command, 1947; C-in-C Air Forces, Western Europe, 1951; Air Deputy to Supreme Allied Commander, **Europe**, 1 Apr 1951–.**

³ **Air Marshal Sir Victor Goddard, KCB, CBE, DSM (US); **RAF** (retd); born Harrow, Middlesex, 6 Feb 1897; joined RN 1910; transferred RNAS 1916; seconded **RAF** 1918; permanent commission **RAF** 1919; Senior Air Staff Officer, GHQ BEF, **France**, 1940; DD Plans, **Air Ministry**, 1940; Director of Military Co-operation, **Air Ministry**, 1940–41; Chief of Air Staff and Commander NZ Air Forces, South Pacific, 1941–43; Air Officer i/c Admin, ACSEA, 1943–46; British Joint Services Mission, **USA**, 1946–48; Air Council Member for Technical Services, and Commandant Empire Flying School, 1948–51.**

⁴ **Group Captain R. J. Cohen, CBE, AFC; **RNZAF**; **Wellington**; born Feilding, 6 Sep 1908; joined **RAF** 1928; **RNZAF** 1935; commanded No. 2 (GR) Sqdn, **Nelson**, 1940–42; CO Whenuapai, 1942–43; OC NZ Ferry, 1943; CO Hobsonville, 1944; CO Ohakea, 1944–45; served with No. 1 (Islands) Group, 1945; CO Ohakea, 1946; DCAS, **RNZAF**, 1946–47; attached **RAF** 1947–49; DCAS, **RNZAF**, 1950–53.**

were made in **London** towards the end of September 1939 by Viscount Stanley Bruce, then High Commissioner for **Australia** in the **United Kingdom**, in a conversation with Captain H. H. Balfour, the British Under-Secretary of State for Air. They came at a dramatic

moment in British history. **Poland** had just been overrun in a lightning campaign in which the **German Air Force** had played a major role. Clearly air supremacy was necessary if the British people were to survive. But it seemed that **Britain** would be unable to train the large numbers of airmen required, for not only were the **British Isles** too small to provide sufficient airfields but they were also too close to the main theatre of war, and training operations would probably be interrupted by enemy raids. Bruce's suggestions were simple and direct:

- (**Canada, Australia** and New Zealand should pool their resources in a) aircrew training. ¹
- (Elementary training should take place in their own territories and, so b) far as possible, with equipment, including aircraft, produced by each Dominion.
- (Pilots from **Australia** and New Zealand, on completion of their c) elementary training, should go to **Canada** for further training on aircraft which he hoped would be produced in **Canada** but might have to be supplemented from the **United Kingdom**.
- (On completion of their training, pilots to proceed to **Britain** to join d) the squadrons of their own Dominions.

After discussions in **London** between the High Commissioners, these proposals were submitted to the Dominions concerned by the British Government, and representatives met at **Ottawa** towards the end of October to formulate a detailed scheme. Some delay was experienced in reaching agreement owing to the difficulty of apportioning the financial responsibility and the rather natural desire of the Canadian Government to have overall control of the training in **Canada**. No question arose over the control of training in **Australia** or New Zealand; in each case men were to be trained in schools belonging to the Dominion and the training was to be run by the Dominion air force concerned, with help from the **United Kingdom** by the loan of officers and men as required. But **Australia** and New Zealand, while enthusiastic about the training scheme as a whole, were doubtful about the cost of doing so much advanced training in **Canada**, and eventually the final plan,

¹ South Africa was left out because, at the time, the extent to

which she was willing to co-operate was doubtful. Subsequently, however, training schools were established in both South Africa and Rhodesia. During 1941 and 1942 British pupils were also trained in the **United States**.

approved in December 1939, provided for each of the Dominions doing some of the advanced training as well as the elementary training for its own contingent. Detailed arrangements were agreed upon for:

- (i) The establishment and operation of training organizations in each country.
- (ii) The number of pilots and aircrew to be recruited and the numbers to be trained by each Dominion.
- (iii) The operational employment of Dominion aircrew in the **Royal Air Force** or in Dominion units with it.
- (iv) The distribution of costs, rates of pay, training syllabus and the provision of aircraft.

The New Zealand training schools were able to reach the full size scheduled for them under the Empire Plan as early as the end of 1940. Subsequently the Dominion's contribution in flying training was to prove substantial, although her contribution in manpower was to be even greater.

The outbreak of war with **Japan** in December 1941 was to raise special problems, since a large number of personnel had to be recruited and trained for service with air units in the **Pacific** or in defence of the Dominion. Nevertheless, New Zealand continued to send her full quota of pupils to **Canada** for training, even though they had to cross the **Pacific** in small groups under adverse conditions in all kinds of ships. By the end of the war 2750 aircrew had been trained to advanced standard in New Zealand and sent overseas to serve with the **Royal Air Force** in **Europe**, the **Middle East**, and in South-East Asia. In addition 2900 pilots, 1800 navigators, 500 bomb aimers, and 2700 wireless operators were trained to elementary standard and sent to **Canada** to continue their training. A further 880 went to serve in various technical ground trades with the **Royal Air Force**.

One of the most interesting provisions of the Empire Training Plan was Article 15, by which the **United Kingdom** undertook that, pupils of **Canada**, **Australia** and New Zealand shall, after their training is completed be identified, with their respective Dominions, either by the method of organising Dominion units and formations or in some other way, such methods to be agreed upon with the respective governments concerned. The United Kingdom government will initiate discussions to this end.

For both operational and administrative reasons, New Zealand was reluctant to establish and maintain Royal New Zealand Air Force squadrons in **Britain**,¹ so eventually it was decided that six

¹ The Australian Government took a similar view, but **Canada** was more insistent that its nationals should serve in Royal Canadian Air Force squadrons.

units formed in the **Royal Air Force** should be identified with the Dominion and designated 'New Zealand Squadrons'. The personnel for the new squadrons were to be found from men already serving in **Britain**, supplemented by new arrivals. This was, in fact, carrying on the tradition already established by No. 75 New Zealand Squadron which had been formed in Bomber Command shortly after the outbreak of war. Of the new units, three were subsequently formed in Fighter Command, two in **Coastal Command**, and one in Bomber Command.

The first to be established was No. 485 Fighter Squadron. It began to form on 1 March 1941 at **RAF Station Driffield**, in **Yorkshire**, under Squadron Leader Knight,¹ with Flight Lieutenant Brinsden and Flying Officer Martin² as the first flight commanders. All three already had considerable flying experience. Knight had joined the **Royal Air Force** after working his way to England as a ship's writer and during the early part of the war had done valuable work as an instructor. Towards the end of 1940 he went to No. 257 Hurricane Squadron, and subsequently

flew as flight commander with a Czech unit before being posted to the New Zealand squadron. Brinsden and Martin had both joined the **Royal Air Force** in 1937. Brinsden went to No. 19 Fighter Squadron, with which he remained until the end of the Battle of **Britain**. Martin flew with bomber units until the end of 1940, serving in **France** with a Fairey Battle squadron during the German advance. Then he transferred to fighters and spent six months on operations flying Hurricanes. There were other experienced pilots among the twenty New Zealanders who joined No. 485 Squadron during the early weeks of its career. One of them, Pilot Officer E. P. Wells, who was to rise to command the squadron within the year, already had three Messerschmitts to his credit along with several more probables. Another was Sergeant Crawford-Compton,³ who had joined the **Royal Air Force** as an aircraftsman. He was subsequently to become one of the Dominion's outstanding fighter pilots. While most of the squadron's ground staff were supplied by the **Royal Air Force**, there were, even in the early stages, several armourers and wireless mechanics from New Zealand.

¹ Group Captain M. W. B. Knight, DFC, Legion of Merit (US); **RAF**; born **Dannevirke**, 8 Jul 1916; joined **RAF** 1935; commanded No. 485 (NZ) Sqdn, 1941; Operations Staff, HQ NWAFF, 1943; Planning Staff, HQ MAAF, 1944; commanded **RAF** Stations, **Ismailia** and Ramat David, 1945.

² Flight Lieutenant J. C. Martin; born **Timaru**, 6 May 1914; joined **RAF** 1937; killed on air operations, 27 Aug 1941.

³ Wing Commander W. V. Crawford-Compton, DSO and bar, DFC and bar, Silver Star (US), Legion of Honour and Croix de Guerre with Palm (Fr); **RAF**; born Invercargill, 2 Mar 1916; joined **RAF** Oct 1939; commanded No. 64 Sqdn, 1942; Wing Leader, Hornchurch, 1943; Wing Leader, No. 145 Wing, 2nd TAF, 1944; Planning Staff, No. 11 Fighter Group, 1945; Air Attache, **Oslo**, 1950-.

The first weeks were devoted to intensive training and practice

flying in rather worn Spitfires. Then, on 13 April, with 14 pilots fully operational by day, the unit began to fly convoy patrols off the East Coast. But apart from occasional 'scrambles' which failed to produce any notable incident, the next few weeks passed quietly. On the 21st the squadron moved to a new base at Leconfield, a few miles from Driffield, and throughout the next month protective convoy patrols were continued. Several pilots also flew sorties by night against the German raiders.

The first engagements with the enemy came on the evening of 2 June, when four pilots intercepted Junkers 88s attacking a convoy off the **Yorkshire** coast. In the first three encounters the enemy aircraft escaped into cloud after the initial shots had been exchanged, but in one combat Knight scored hits which eventually caused the enemy machine to crash into the sea near the convoy. Its destruction was confirmed by the crew of one of the escort vessels. Three weeks later the squadron began to take part in the larger offensive operations being flown by Fighter Command over the fringe of the Continent, and before long had won a high reputation for operational efficiency. Meanwhile, considerable interest had been taken by the people of New Zealand in the formation of this first Dominion fighter squadron and the sum of £126,000 sterling was raised by public subscription to provide aircraft for the new unit. In 1942, when No. 485 Squadron was re-equipped with an improved type of Spitfire, the aircraft were named after the provinces, giving an added New Zealand character to the unit. Pilots flying these machines subsequently accounted for more than twenty enemy aircraft. Altogether, by the end of the war, the squadron was to be credited by Fighter Command with the destruction of 58 enemy machines.

No. 489 Squadron was the next of the new units in the Royal **Air Force** to be identified with the Dominion. It began to form on 12 August 1941 at **Leuchars airfield** in **Scotland**, a **Royal Air Force Coastal Command** station, the intention being to employ the squadron in the campaign against the enemy's communications in the North Sea and

along the Norwegian coast. The formation of the squadron began quietly with the arrival of a few officers at Leuchars early in the month. Among them were Wing Commander Brown,¹ an experienced English pilot, who was to command the

¹ Group Captain J. A. S. Brown; born Alverstoke, Hampshire, 30 Oct 1911; joined **RAF** 1930; permanent commission 1936; commanded No. 489 (NZ) Sqdn, 1941–42; No. 152 Wing, 1943; No. 9 OTU, 1943–45; RAF Station, Gander, 1945.

new unit, and Squadron Leaders Sandeman,¹ of **Glasgow**, and Evans,² a Londoner, the first flight commanders. During the next weeks more officers and men, some of whom had already flown with **Coastal Command**, were posted to the squadron. Among the early arrivals were Flight Lieutenant Dinsdale, who was later to command the squadron, and Pilot Officers Hartshorn³ and Richardson,⁴ both of whom were soon to distinguish themselves in operations against the enemy. Gradually the squadron began to take shape. A few Beaufort aircraft arrived and training commenced. At first this training was confined almost entirely to the pilots, but later crews began to form and practise the tactics which they would soon employ in real earnest. Bombs were dropped on a dummy ship in a field and dummy torpedoes were launched against targets off the coast. There were long flights over land and sea so that the members of each crew could learn to work together as a team. Meanwhile New Zealanders continued to join the squadron singly and in groups until, by December 1941, the proportion was sufficient to give the unit a definite New Zealand character. Unfortunately, completion of operational training was hindered by the shortage of torpedo-bomber aircraft, which led to re-equipment first with Blenheims and then, in March 1942, with Hampdens. By that time the squadron had moved to **Thorney Island** in the south of England, and it was from this airfield that the squadron began operating over the **Bay of Biscay** early in May on anti-submarine patrols. A few months later the squadron returned to **Scotland** to take up the role for which it was originally intended and in which it subsequently served with distinction—

searching for and attacking enemy shipping along the Norwegian coast and in the North Sea.

About the middle of 1941, with the increasing threat of Japanese aggression in the **Far East**, both **Australia** and New Zealand were asked to aid **Britain** in reinforcing the air defences of **Malaya**. Therefore the third New Zealand unit to be established in the **Royal Air Force**, No. 488 Squadron, was formed at **Singapore** in October of that year.⁵ Most of the aircrew were direct from the

¹ Wing Commander B. J. Sandeman; born **Glasgow**, 18 Aug 1915; joined **RAF** 1935; CGI, No. 4 SFTS, **Iraq**, 1939–41; commanded No. 1 Torpedo Refresher School, 1943; RAF Station, Sumburgh, 1943–44; CI, No. 5 OTU, 1944–45.

² Wing Commander G. H. D Evans, DSO, DFC; born **Poplar, London**, 29 May 1917; Cranwell Cadet; permanent commission **RAF** 1937; commanded No. 415 Sqdn, 1943.

³ Squadron Leader R. G. Hartshorn; England; born **Hastings**, 13 Dec 1919; bank officer; joined **RNZAF** May 1940.

⁴ Flight Lieutenant J. J. Richardson, DFC; **Oamaru**; born **Toowoomba, Australia**, 12 Jan 1915; marine engineer officer; joined **RNZAF** Dec 1940; p.w. 18 Jan 1943.

⁵ A proportion of the aircrew trained in New Zealand under the Empire Plan was already being sent to **RAF** squadrons forming in **Malaya**. In addition, New Zealand sent an airfield construction unit which did valuable work before the Japanese attack began.

Dominion's flying training schools, but the squadron commander, Squadron Leader W. G. Clouston, and the two flight commanders, Flight Lieutenants J. N. Mackenzie and Hutcheson,¹ came from **Britain** where they had already had considerable experience in operations with the

Royal Air Force. Although equipped with obsolescent aircraft and not fully operational when the Japanese assault began, the unit gave a good account of itself in the defence of **Singapore** and the protection of shipping in the approaches to the port during January 1942. Withdrawal was ordered at the end of that month and the squadron's personnel eventually returned to New Zealand by way of **Java** and **Australia**. The unit was then disbanded and most of its surviving members absorbed into squadrons in New Zealand. However, a second No. 488 Squadron began to form at Church Fenton in **Yorkshire** on 25 June 1942, as a night fighter unit equipped with Beaufighters. Wing Commander Trousdale was appointed to command the squadron, and Squadron Leaders Rabone and Gard'ner were his first flight commanders. All three were experienced pilots, having joined the **Royal Air Force** early in 1939. Trousdale, who had been prominent in the air fighting over **France** and during the Battle of **Britain**, won distinction as a night fighter pilot with Defiants and in a Canadian Beaufighter squadron. On joining No. 488 Squadron he was credited with the destruction of eight enemy aircraft, five of them at night. Rabone had flown Fairey Battle aircraft based in **France** from the outbreak of war, and in May 1940 he took part in the famous raids on the bridges over which the Germans were advancing. Later he transferred to fighters and, flying Hurricanes and Defiants, achieved success both in daylight and at night. By the time he joined the New Zealand squadron, Rabone held a remarkable record in having baled out safely on no fewer than six occasions. Gard'ner served with No. 141 Squadron from the early days of the war until October 1941, flying **Blenheim** night fighters and later Defiants. He then joined the Beaufighter squadron with which Trousdale was flight commander. Among the New Zealand aircrew to join No. 488 Squadron during the first months of its career were Flying Officers Davison ² and McChesney and Pilot Officers Cutfield ³ and Gunn, ⁴ all of whom already had experience of night fighter patrols. McChesney and Gunn had both been credited with the destruction of enemy aircraft, while another early arrival, Flight Lieutenant

¹ Squadron Leader J. R. Hutcheson, DFC; **Wellington**; born **Wellington**, 18 Mar 1912; salesman; joined **RNZAF** Oct 1939.

² Squadron Leader F. W. Davison; England; born **Timaru**, 2 Aug 1921; watchmaker and jeweller; joined **RNZAF** Feb 1941.

³ Flight Lieutenant A. S. Cutfield; **Auckland**; born **Cambridge**, 24 May 1916; clerk; joined **RNZAF** Mar 1940.

⁴ Flight Lieutenant J. A. Gunn; born **Gisborne**, 12 Feb 1920; motor mechanic; joined **RNZAF** Aug 1940; killed on air operations, 15 Sep 1943.

Ball, ¹ had completed two tours of bomber operations, the second with No. 75 Squadron. At the end of October, by which time the squadron had moved to Ayr in **Scotland** to begin the second stage of its training, 21 New Zealand aircrew were serving with it, all but three being pilots.

The formation of the new squadron was not without its difficulties, since there was an acute shortage of trained maintenance staff which affected aircraft serviceability and delayed training. As far as possible the crews were kept occupied by practice flights in which they used their AI equipment and in exercises in co-operation with searchlights and anti-aircraft batteries. The monotony of this training was relieved for some crews by occasional operational flights, the first of which was flown on 2 October by Flight Lieutenant McKinnon, ² with McChesney as his navigator-radio operator. This sortie was an attempt to intercept an enemy aircraft reported to be in the vicinity of Ayr, but no sighting was made. On the 13th B Flight under Rabone was detached to Drem, near Edinburgh, to operate against the German weather reconnaissance aircraft which made periodical flights over the North Sea; but as these machines usually kept well out to sea, the few sorties flown proved fruitless. On 21 November Rabone piloted a Beaufighter on an air-sea

rescue search, during which he succeeded in finding the wreckage of the missing aircraft and was able to direct rescue ships to it. An early misfortune occurred on the night of 5 December when two aircraft of A Flight collided at the conclusion of an exercise, the four aircrew—McKinnon and McChesney in one aircraft, and Flying Officer Peacocke³ and his English navigator-radio operator in the other—being killed. Towards the end of the year the squadron was re-equipped with new Beaufighters fitted with improved AI equipment, and crews continued their training with added zest knowing the squadron would soon turn to the offensive. Subsequently No. 488 Squadron was to achieve considerable success in operations over enemy territory, particularly on intruder missions. In 1944, after the invasion of the Continent, the squadron was one of the units to move across the Channel in support of the advancing Allied armies, and in the last months of the war flew from an advanced base in **Holland**.

Two further New Zealand squadrons were to be established in the **Royal Air Force** during 1942. In March No. 486 Fighter Squadron formed at Kirton-in-Lindsey, Lincolnshire, while No. 487

¹ Flight Lieutenant E. C. Ball; born Kinsdale, **Ireland**, 28 Mar 1912; shepherd; joined **RNZAF** Mar 1940; killed on air operations, 9 Oct 1943.

² Flight Lieutenant A. C. McKinnon; born **Leamington, Waikato**, 27 Jan 1917; clerk; joined **RNZAF** Mar 1940; killed in flying accident, 6 Dec 1942.

³ Flying Officer R. J. B. Peacocke; born **Auckland**, 12 Apr 1916; clerk; joined **RNZAF** Aug 1940; killed in flying accident, 6 Dec 1942.

Squadron began training as a light bomber unit at Feltwell, Norfolk, in August. Both units were to win distinction, No. 486 in the shooting down of flying bombs launched against southern England in the middle

of 1944, and No. 487 Squadron in its sorties over the Continent with the **Tactical Air Force**. The last of the New Zealand squadrons, No. 490, was formed in **West Africa** early in 1943 and was to do valuable work in convoy protection and anti-submarine patrols in that area. ¹

But meanwhile, and even after the formation of these units, the large majority of New Zealanders were to be found in Royal **Air Force** squadrons. Indeed the Dominion squadrons, particularly those with Bomber and Coastal Commands, did not achieve a full complement of New Zealanders. They were, in fact, a token of a more widespread contribution, an arrangement which had certain advantages. Those who lived and flew with men from other parts of the Commonwealth acquired a broader outlook and understanding which they would probably not have attained had the members of their units been drawn from one country alone.

* * * * *

While most of the New Zealanders in the **United Kingdom** during 1941 were with operational units of Bomber, Fighter or Coastal Commands, there was a significant number engaged in various other duties which contributed much to the growing British strength in the air. In **Flying Training Command** Air Vice-Marshal Park was in command of No. 23 Group throughout the year; Wing Commander Moir continued in command of the flying training school at Reading, where his chief flying instructor was Squadron Leader Hooper; Wing Commander Grindell, who had served in a similar post, was now at Headquarters **Flying Training Command**; several other New Zealanders who had specialised in armament duties were on the staff of **Royal Air Force** gunnery schools, among them Wing Commanders Fear ² and Goodhart, ³ the latter born in **Australia** but educated in New Zealand. Flight Lieutenants R. M.

¹ An account of the early work of these units is given in later chapters.

² Group Captain A. H. Fear; born **Masterton**, 21 Sep 1908; permanent commission **RAF** 1932; commanded No. 27 Sqdn, **India**, 1939–40; RAF Station, Pembrey, 1941–42; No. 4 AGS, 1943–44.

³ Group Captain J. Goodhart; born **Perth, Australia**, 21 Mar 1908; joined **RAF** 1931; permanent commission 1936; Air Staff armament duties, No. 1 Bomber Group, 1938–39; HQ Bomber Command, 1940–41, and **Air Ministry**, 1941–43; Ordnance Board, Ministry of Supply, 1943–44; killed on active service by enemy action, 21 Jan 1944.

Mackenzie, ¹ Maddox, ² and Morrish ³ were prominent among those doing valuable work as instructors at flying training schools in **Britain**.

New Zealanders were now also associated with air training in various parts of the Commonwealth, most of them men who had joined the **Royal Air Force** before the war and completed tours of operational duty in the **United Kingdom**. Wing Commander Seavill ⁴ served in **Canada** from early in 1940, while Wing Commander D. McC. Gordon commanded a flying training school there during the same year. Others who followed in 1941 included Wing Commander McDonald ⁵ and Squadron Leaders Hunt ⁶ and Turner. ⁷

Among those who went to South Africa ⁸ were Wing Commander Lee, ⁹ who had served with the **Royal Air Force** in **Iraq** during the middle thirties, Wing Commander Anderson, ¹⁰ who had been a chief flying instructor in the **United Kingdom**, and Wing Commander McWhannell ¹¹ and Squadron Leader Bray, ¹² both of whom

¹ Wing Commander R. M. Mackenzie, DSO, DFC, AFC; **RAF**; born Tai Tapu, 8 Sep 1916; joined **RAF** 1937; transferred **RNZAF** Jan 1944; commanded No. 227 Sqdn, **Middle East**, 1943; Training Staff, HQ **RAF**, **Middle East**, 1944; transferred **RAF** 1947.

² Wing Commander R. G. Maddox, AFC; **Auckland**; born **Dunedin**, 24 Jul 1913; joined **RAF** 1937; transferred **RNZAF** Jan 1944; commanded No. 99 Sqdn, **India**, 1943–44.

³ Wing Commander D. W. Morrish, AFC; **Miranda, NSW**; born **Takaka, Nelson**, 25 Nov 1910; served **RAF** 1930–35; recalled Sep 1939; transferred **RNZAF** Jan 1944; commanded No. 51 Group Pool, **Flying Training Command**, 1942; CFI, No. 15 EFTS, 1942–43; CI, No. 29 EFTS, 1943–44; CFI, No. 21 EFTS, 1944.

⁴ Wing Commander F. C. Seavill; born **Parnell, Auckland**, 17 Jun 1910; joined **RAF** 1930; Admin Staff duties, HQ **Flying Training Command**, 1938–40; Air Staff duties, **Canada**, 1940–42; commanded No. 487 (NZ) Sqdn, 1942; killed on air operations, 6 Dec 1942.

⁵ Wing Commander G. E. McDonald; born **Wainui**, 29 Dec 1910; joined **RAF** 1932; Armament duties, No. 4 Bombing and Gunnery School, 1940–41; No. 31 Bombing and Gunnery School, **Canada**, 1941–42; HQ Army Co-operation Command, 1942; commanded No. 4 Sqdn, 1942–43; killed on air operations, 28 Apr 1943.

⁶ Squadron Leader L. L. Hunt; born **Wellington**, 6 Aug 1913; joined **RAF** 1935.

⁷ Squadron Leader W. C. Turner; **Vancouver**; born **Ashburton**, 30 Apr 1915; joined **RAF** Feb 1938; transferred **RNZAF** Jun 1944.

⁸ The Empire Air Training Scheme was extended to South Africa towards the end of 1940. The first flying training school in Rhodesia was opened in May of that year.

⁹ Group Captain D. P. Lee; born **Auckland**, 15 Nov 1907; joined **RAF** 1931; Staff duties, HQ No. 6 Bomber Group, 1939–40; Asst to Director of Personnel, **SAAF**, 1940–43; Liaison duties, **SAAF**, 1943–45.

¹⁰ Group Captain L. H. Anderson; born **Lower Hutt**, 5 Aug 1910; joined **RAF** 1930; permanent commission 1936; commanded No. 217 Sqdn, 1940; commanded No. 1 EFTS, South Africa, 1941; CFI, No. 4 SFTS, South Africa, 1941–42; commanded Wings in **Middle East**, 1942–43; SASO, No. 201 Group, **Middle East**, 1943; commanded No. 247 Wing, **Middle East**, 1943–44; RAF Station, Berka, 1944; No. 4 Combined Air Observation, Navigation and Bombing School, South Africa, 1944–45.

¹¹ Group Captain P. A. McWhannell, OBE; born **Wellington**, 5 Jun 1910; joined **RAF** 1933; permanent commission 1939; commanded No. 4 Combined Air Observation, Navigation and Bombing School, South Africa, 1941–44; SASO, No. 25 Group, 1944–45.

¹² Wing Commander J. W. H. Bray, OBE; **RNZAF**; **London**; born Waimate, 7Apr 1913; entered **RAF** 1936; transferred **RNZAF** 1939; Instructor, Navigation School, South **Africa**, 1941; commanded No. 3 (GR) Sqdn, **RNZAF**, 1942; **RNZAF** Station, **New Plymouth**, 1942–44; **Lauthala Bay**, 1944; No. 5 (Flying Boat) Sqdn, 1944–45; **Lauthala Bay**, 1945–47.

had specialised in navigation before the war. Flight Lieutenant Watts ¹ was with the training organisation in Rhodesia as a flying instructor from its earliest stages.

During 1941 a small group of New Zealand airmen flew with the units training in the **United Kingdom** for close co-operation with the Army, establishing a basis upon which the Second Tactical Air Force was later to be built. Wing Commander Donkin ² was a squadron commander. In experimental work in **Britain**, Wing Commander A. E. Clouston was testing the Turbinlite searchlight for night fighters, while Squadron Leader Nicholls ³ was a test pilot in the experimental station at Boscombe Down. Two New Zealanders, **R. McIntyre** ⁴ and H. L. Piper, were also making a significant contribution as members of aircraft firms, McIntyre as a designer with Hawker's and Piper as a test pilot with

Of the relatively large group of doctors now serving with the **Royal Air Force**, Group Captain Macintosh, ⁵ formerly professor of anaesthetics at **Oxford University**, Wing Commanders Grace, ⁶ Skeet ⁷ and Stewart, ⁸ and Squadron Leaders Bellringer, ⁹ Gauvain, ¹⁰

¹ Wing Commander J. E. Watts, AFC; born **Gisborne**, 4 Dec 1918; joined RAF Aug 1938; Flying Instructor, Rhodesia and South Africa, 1941–42; Deputy CI, No. 29 OTU, 1943 and CI, 1944.

² Group Captain P. L. Donkin, CBE, DSO; born **Invercargill**, 19 Jun 1913; Cranwell Cadet; permanent commission **RAF** 1933; commanded No. 225 Sqdn, 1939–40; No. 4 Sqdn, 1940; No. 239 Sqdn, 1940–42; No. 33 Wing, 1942–43; No. 35 Wing 1943–44; Member of RAF Delegation, **USA**, to **Pacific** and **India**, 1944; CI, School of Air Support, 1944–45.

³ Group Captain C.W.K. Nicholls, DSO, OBE; **RAF**; born **Palmerston North**, 7 Oct 1913; joined **RAF** 1934; test pilot, Aeronautical and Armament Experimental Establishment; 1940–41; commanded Handling Sqdn, Empire Central Flying School, Hullavington, 1942–43; commanded Operational Training Wing, **Ohakea**, 1943–44; NZ Fighter Wing, **Bougainville**, 1944; SASO, Northern Group, 1944; SASO, No. 46 Group, Transport Command, 1945–46; commanded No. 24 Commonwealth Sqdn, 1946–48; Air Attache, Nanking, 1948–49.

⁴ **R. McIntyre**; born **Glasgow**, 18 Jun 1900; designer with Hawker Aircraft Ltd., 1925–42; Chief Designer, Scottish Aviation Ltd., 1942–45.

⁵ Air Commodore R. R. Macintosh, Order of Liberty (Nor); born **Timaru**, 17 Oct 1897; Professor of Anaesthetics, **Oxford University**; joined **RAF** Oct 1941; Consultant in Anaesthetics, CME, 1941–45.

⁶ Wing Commander R. F. T. Grace; born Taupo, 14 Dec 1895; served **RAF** 1924–31; recalled Aug 1939; medical duties, **RAF Hospital, Ely**, 1940–41; Specialist in Neuro-Psychiatry, **RAF Hospital, Torquay**, 1942–43; commanded **RAF Hospital, Littleport**, 1943; neuro-psychiatrist, **Officers' Hospital, Blackpool**, 1943–45.

⁷ Group Captain J. G. Skeet; born **New Plymouth**, 20 Apr 1889; served in Australian Army Medical Corps in First World War; transferred **RAF** 1919 and served until 1934; rejoined **RAF** Oct 1939; medical duties, **RAF Hospital, Torquay**, 1941–42; SMO, **Reykjavik, Iceland**, 1942; commanded Rehabilitation Unit, No. 28 Group, 1943; SMO, **RAF Station, Kirkham**, 1945.

⁸ Wing Commander J. G. Stewart, MC; born **Invercargill**, 7 Aug 1890; joined **RAF** Sep 1940; President, **SMEC**, 1941; President, No. 10 CMB, CME, 1941; SMO, No. 11 Fighter Group, 1941–42; SMO, Nos. 224 and 225 Groups, **India**, 1943; SMO, Base HQ, **Bombay**, 1943–45.

⁹ Wing Commander H. E. Bellringer; born **New Plymouth**, 3 Dec 1906; joined **RAF** 1935; permanent commission 1940; MO, No. 1 FTS, 1939–41; medical duties, **RAF Station, Blackpool**, 1941; President, No. 8 ACMB, CME, 1942; SMO, No 7 PRC, 1942–43; DPMO, AHQ, **West Africa**, 1944–45.

¹⁰ Squadron Leader J. H. P. Gauvain; born **Waiuku**, 29 Aug 1915; joined **RAF** Sep 1939; medical duties, **RAF Station, Martlesham Heath**, 1939–40; **RAF Station, Cardington**, 1940; HQ No. 3 Bomber Group, 1941; MO, **RAF Station, Aqir, Middle East**, 1943–44; FPMO, HQ No. 203 Group, **Middle East**, 1944; killed in flying accident, 14 Aug 1944.

MacGibbon ¹ and Willcox, ² were among those who held senior posts. New Zealanders were also to be found serving in the engineering and equipment branches, in photographic interpretation, and in various staff appointments. Wing Commander Wall, ³ who now held a senior post

in the equipment branch at Air Ministry, had entered the **Royal Air Force** as a Cranwell cadet and subsequently served in **India** and **Iraq**. It was while flying on operations on the North-West Frontier that he lost the sight of one eye and was forced to undertake ground duties. Wing Commander R. G. R. Buckley, ⁴ who also had long pre-war experience in the **Royal Air Force**, and Squadron Leader Mason ⁵ went with the Royal Air Force Mission to **Russia** in October 1941.

Two months earlier, when a **Royal Air Force** wing of two Hurricane squadrons had been sent to **Russia**, Wing Commander Isherwood was selected to command the unit. Isherwood had joined the **Royal Air Force** in 1930 and, after service in **India** and the **Middle East**, flew as a test pilot in the **United Kingdom**. The main purpose in despatching the Hurricanes to **Russia** was to demonstrate their performance and to give instruction in maintenance, as these machines were now being supplied to the Russian Air Force by **Britain**. The wing was also to assist in defending the vital Arctic port of Murmansk which was threatened by the German advance from **Finland**. Isherwood encountered many difficulties but, during the two months the wing remained in **Russia**, both purposes were achieved. By the middle of October instruction in flying and maintaining the Hurricanes had been completed and the last aircraft handed over. Meanwhile, under difficult conditions and at times in severe weather, patrols had been flown by British pilots escorting Russian bombers to their targets and intercepting German raiders. In all, they claimed 15 enemy aircraft for the loss of only one pilot.

¹ Wing Commander G. B. MacGibbon; born **Hawera**, 30 Oct 1908; joined **RAF** 1936; permanent commission 1939; medical duties, No. 8 CMB, 1939–41; Ear, Nose and Throat Specialist, No. 8 ACMB, 1941; SMO, No. 114 Wing, **West Africa**, 1944; SMO, No. 44 Group, Transport Command, 1945.

² Wing Commander H. L. Willcox; born **Invercargill**, 7 Nov 1907; joined **RAF** 1935; permanent commission 1938; Staff duties, DGMS, **Air Ministry**, 1940–42; SMO, No. 153 Wing, 1942; SMO, No. 17 Group, 1942; DPMO, AHQ, North Africa, 1943–44; DPMO,

HQ Med, ME, 1944; DPMO, HQ **Coastal Command**, 1945.

³ Group Captain A. Wall, OBE; born **Christchurch**, 11 Jan 1908; Cranwell Cadet 1926–28; permanent commission **RAF** 1928; equipment duties DGE, **Air Ministry**, 1941–43; Group Captain, Equipment Staff, **RAF Staff College**, 1943–44; D of Policy, **Air Ministry**, 1944–45.

⁴ Wing Commander R. G. R. Buckley; born **Wanganui**, 4 Apr 1909; permanent commission **RAF** 1934; served with **RAF Mission to Russia**, 1941–42; engineering duties, No. 82 OTU, 1943–44.

⁵ Group Captain R. H. Mason, OBE; born **Weybridge, Surrey**, 10 Sep 1918; joined **RAF** Sep 1938; served with **RAF Mission to Russia** on Port Equipment Staff, 1941–43; Staff duty, Admin Plans, **India**, SEAC and ACSEA, 1943–45.

The Dominion was also represented in the small band of British pilots who flew American-built aircraft to the **United Kingdom** during 1941. The organisation of an **Atlantic** ferry service had been commenced early in the previous year when aircraft were desperately needed in **Britain** to supplement home production, then still in the early stages of expansion. At this time Hudson aircraft were being bought in the **United States** for **Coastal Command**, but under the system of 'cash and carry' the machines were taking up valuable shipping space. Further, they were liable to loss at sea, and there was a lapse of three months between their test flights in **America** and their delivery to squadrons in the **United Kingdom**. By flying them across the **Atlantic**, shipping space would be released and the delivery time reduced to a matter of days. Eventually, with the assistance of the Canadian Pacific Railway Company, an organisation for ferrying machines to the **United Kingdom** was established in August 1940 and volunteers for aircrew recruited from both sides of the **Atlantic**. British Overseas Airways supplied experienced pilots, such as Captain Bennett,¹ who was later to command the **Pathfinder Force** in Bomber Command. Bennett led the first delivery

flight of seven Hudsons which reached Northern **Ireland** on the morning of 11 November. A similar flight completed the crossing three weeks later and thereafter deliveries became more frequent until, by the end of 1941, over 750 aircraft had been flown to the **United Kingdom**. To deal with this rapid expansion Royal Air Force Ferry Command was formed in July of that year under Air Chief Marshal Sir Frederick Bowhill,² with headquarters at Dorval near Montreal. It continued a service which was to deliver many thousands of aircraft to the **United Kingdom** and carry large quantities of urgent and valuable freight and many passengers across the **Atlantic**.

Among the pilots employed on the Atlantic Ferry in the very early stages were Flight Lieutenant L. E. Clark, one of the pioneers of photographic reconnaissance, and Flying Officer Patterson,³ who had been with **Coastal Command** from the outset. Both men were

¹ Air Vice-Marshal D. C. T. Bennett, CB, CBE, DSO, Order of Alexander Nevsky (**USSR**); England; born Toowoomba, **Australia**, 14 Sep 1910; served **RAF** 1931–35 and transferred RAAF 1935; Atlantic Ferry, 1940–41; rejoined **RAF** Sep 1941; commanded No. 77 Sqdn, 1941; No. 10 Sqdn, 1942; AOC No. 8 Pathfinder Group, Bomber Command, 1943–45.

² Air Chief Marshal Sir Frederick Bowhill, GBE, KCB, CMG, DSO, Order of St. Vladimir (Rus), Order of St. Saviour (Gr), Order of Orange Nassau (Hol), Legion of Merit (US), Order of St. Olav (Nor), Order of Polonia Restituta (Pol); **RAF** (retd); England; born Morar, **India**, 1 Sep 1880; joined RN 1913; seconded RNAS 1914 and **RAF** 1918; permanent commission **RAF** 1919; AOC-in-C, **Coastal Command**, 1937–41; AOC-in-C, **RAF Ferry Command**, 1941–43; AOC-in-C, **RAF Transport Command**, 1943–45.

³ Squadron Leader I. C. Patterson, DSO; **Auckland**; born **Auckland**, 19 Aug 1917; joined **RAF** Mar 1939; transferred **RNZAF** Dec 1943; Atlantic Ferry, 1940–41; Operations staff, Azores, 1943–44.

captains in the first party to fly Fortress aircraft across the **Atlantic**. Early in 1941 Flight Lieutenant Max, ¹ from Bomber Command, made three delivery flights within four months when the crews still had to make the return journey by sea. Flight Lieutenant Brass ² was among those who pioneered the South **Atlantic** route by which aircraft were flown from the **United States** to the **Middle East**. Later, with the increased flow of aircraft from the **United States**, it was decided to reinforce Ferry Command with graduates from the training schools in **Canada**, and New Zealand airmen were among those selected. During 1942 Pilot Officer Clarke ³ and Sergeant Irwin ⁴ flew as pilots, Pilot Officer Henderson ⁵ as navigator, and Sergeants Pinfold, ⁶ Thorburn ⁷ and Webb ⁸ as wireless operators. However, as the shortage of ferry crews persisted, some of the airmen newly trained in **Canada** under the Empire Plan, who were about to join operational units in **Britain**, were called upon to fly new aircraft across the **Atlantic** instead of travelling by sea. Many New Zealanders flew the **Atlantic** under this scheme.

This somewhat daring improvisation soon proved itself and became an essential part of the ferry service. These 'one trippers', as they were called, even made the crossing during the northern winter, when many experts considered the idea impracticable. The difficulties they overcame are best illustrated by the recorded experiences of one crew. After a ferry training course at Dorval, they were given a Hudson to deliver to **Britain**. The weather was bad, and shortly after take-off one of the engines iced up. No sooner was this put right than the other engine iced up; after that an oil pipe burst. By then they were nearly half-way across the **Atlantic**, flying blind on one engine in heavy cloud and rain. Eventually fuel began to run short so the pilot brought the aircraft down low in case he should have to 'ditch'. When daylight came

¹ Wing Commander R. D. Max, DSO, DFC; **RAF**; born Brightwater, **Nelson**, 23 Nov 1918; joined **RAF** Aug 1938; transferred **RNZAF** Dec 1943; served on **Atlantic** Ferry, 1941; Flying Instructor, No. 11 OTU, 1941–42 and Deputy CI, 1943; commanded No. 75 (NZ) Sqdn, 1943–44; transferred **RAF** Mar

1947.

² Wing Commander D. M. Brass, DSO; born Otautau, 1 Dec 1916; joined **RAF** 1937; served on Atlantic Ferry, 1941; Instructor, No. 3 School of GR, 1941–42; commanded No. 612 Sqdn, 1943–44; CI, No. 3 School of GR, 1945.

³ Flight Lieutenant W. P. N. Clarke, AFC; **Auckland**; born Dunedin, 5 Nov 1921; farm hand; joined **RNZAF** Sep 1941.

⁴ Flight Lieutenant K. Irwin; **Dargaville**; born Te Kopuru, 7 Sep 1920; farmer; joined **RNZAF** Sep 1941.

⁵ Flight Lieutenant J. A. Henderson; **Hamilton**; born **Oamaru**, 31 Mar 1909; surveyor; joined **RNZAF** Feb 1941.

⁶ Flight Lieutenant M. E. Pinfold; Montreal, **Canada**; born Pahiatua, 22 Sep 1921; farmer; joined **RNZAF** May 1941.

⁷ Flight Lieutenant R. H. Thorburn; **Palmerston North**; born **Palmerston North**, 26 May 1920; carpenter; joined **RNZAF** Jan 1941.

⁸ Flight Lieutenant R. P. Webb, AFC; Montreal; born **Taihape**, 2 Dec 1920; labourer; joined **RNZAF** Mar 1941.

he flew just above the sea in an effort to get clear of the cloud and haze, but in vain. The Hudson struggled on, and the crew were finally preparing to land in the sea when they caught sight of a blur of coastline through the cloud. It was the coast of Northern **Ireland**. The last few minutes were the worst of the flight as the crew felt sure that the petrol would give out before they reached land, but they were just able to reach the coast and make a forced landing in a field before this happened.

The expansion of the Atlantic Ferry was rapid. Additional bases were established, notably at Prestwick airport, in Ayrshire, which became the terminal for a steady flow of machines from **Canada** and the **United States**. Plans for the delivery of medium and light bombers resulted in surveys to seek new bases, culminating in the selection of a site close to the outlet of the Goose River in Labrador, which was destined to become one of the largest air bases in the world. Simultaneously ferry work and air transport in and from the **United Kingdom** were increasing, and New Zealanders were among those who delivered machines within the **British Isles** and flew reinforcement aircraft, passengers, and freight to the overseas theatres. The pioneering efforts in this field formed the basis upon which RAF Transport Command was later established.

Among the many eventful ferrying flights from the United Kingdom in the early war years, one mission in June 1940 holds special interest for the Dominion. At that time Hurricane fighters were urgently needed in the **Middle East**, and Pilot Officer Carter, ¹ then flying with the ferry organisation, was selected to make a trial flight to see whether the Hurricanes, if fitted with extra fuel tanks, could be flown out and time saved. Carter left England the day after the capitulation of **France**; the Italians had already declared war and were occupying islands along his route. Refuelling at one French outpost had to be carried out at the point of a revolver, but the flight to **Malta** and then on to **Cairo** was completed successfully.

During the second year of war New Zealanders also began to share in the work of the special meteorological flights and of the air-sea rescue squadrons. There was nothing very spectacular about these missions. The aim of the 'met' flights was simply to provide regular and accurate information, but it should be remembered that to achieve this purpose, and thus help the operations of the front-line squadrons and the other services, bad weather flying was experienced to the full by the crews of these units. On a wild winter's day it was sometimes only the 'met' aircraft which took off to face storm and gale over the North Sea or the **Atlantic**. Their

¹ Flight Lieutenant R. W. H. Carter, AFC; England; born **Opotiki**, 22 Apr 1915; joined **RAF** Sep 1939; transferred **RNZAF** Jan 1944; test pilot, glider towing, 1941–45.

work was now of particular value since almost all other sources of weather information had been lost: ships in the **Atlantic** could not risk sending their reports by wireless for fear of betraying their position to the U-boat packs, while information from weather stations on the Continent was no longer available. The aircraft of **Coastal Command** helped to fill the gap, but as most of their patrols were flown near sea level, important information concerning the weather at higher altitudes was lacking. Therefore, during 1941, special units were formed to fly regular weather sorties in specific areas and at higher altitudes. Flight Lieutenant Heaphy, ¹who had been with **Coastal Command** from the outbreak of war, was prominent in these duties during the early stages and was later commended for his work in command of one of the meteorological flights. By 1942 New Zealanders were flying weather patrols with each of the special units based in **Cornwall**, **Scotland**, and **Iceland**.

The work of the air-sea rescue squadrons had developed from the efforts of a few pioneers during the Battle of **Britain** when amphibian Walruses—one of them flown by ‘Digger’ Aitken—² and a few Lysanders co-operating with naval launches had rescued pilots from the Channel. The success achieved was so encouraging that early in 1941 an organisation was formed to co-ordinate and control all available means of rescuing ‘ditched’ crews.

At the same time various devices were under development for dropping help from the air to airmen in distress. RAF Station Thornaby produced the Thornaby bag, a strengthened parachute bag buoyed with floats and containing food, drink, cigarettes and first-aid equipment. Then RAF Station Bircham Newton provided the Bircham barrel, which was followed by the Lindholme dinghy; all proved their value in saving lives. By the end of the year specially trained units equipped with the

faithful Anson and the longer range Hudson were available for searches over the North Sea, the Channel, and the **Atlantic** approaches. Flying Officers Hender ³ and Stephenson ⁴ were among those who navigated aircraft of these units in successful searches during 1942, when altogether over a thousand airmen were found and saved from the waters round the **British Isles**.

¹ Squadron Leader W. D. Heaphy, AFC; born **Greymouth**, 23 Aug 1916; joined **RAF** Jun 1939; transferred **RNZAF** Jan 1944; died (effects of war service) 26 Mar 1949.

² R. F. Aitken, then a flight lieutenant. It was while stationed at Gosport as an instructor in June 1940 that Aitken conceived the idea of employing amphibian aircraft to retrieve pilots from the sea; the suggestion meeting with the approval of his senior officers, he 'scrounged a Walrus from the **Fleet Air Arm**' and began operations in the Channel off the Isle of Wight. Sometimes a German Heinkel float plane landed nearby on a similar mission, and the two aircraft, watching each other suspiciously, would remain floating placidly on the sea until air battles started above. In the few months he was engaged on this air-sea rescue work Aitken picked up 35 British and German airmen.

³ Squadron Leader W. C. K. Hender; **Auckland**; born **Lyttelton**, 20 Mar 1910; farmer; joined **RNZAF** May 1941.

⁴ Flight Lieutenant K. Stephenson; **Wellington**; born Blyth, Northumberland, 16 Apr 1920; clerk; joined **RNZAF** Feb 1941.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 11 – DAY FIGHTERS, 1941

CHAPTER 11

Day Fighters, 1941

BY the end of October 1940 the German air attacks on the British Isles in daylight had largely spent their force; they had been replaced by night raids on London that were soon to be extended to the principal ports and industrial centres. But the daylight attacks did not cease abruptly. Indeed no sharp break was noticeable at the time as, throughout November, the enemy continued the fighter and fighter-bomber sweeps over Kent and Sussex which had been a feature of his operations during the previous weeks. However, the German formations now flew at less extreme altitudes than before, probably owing to the declining season, and it became easier to intercept them. Heavy casualties were inflicted on the enemy and the proportion of British pilots lost was smaller than in earlier months.

In November 1940 there were two interesting developments in the enemy plan and method of attack. Firstly, there was a brief renewal of daylight bombing attacks on shipping in the Channel and Thames Estuary, in which the Germans employed Junkers 87 dive-bombers which had not been seen in action since the middle of August. Secondly, Italian bombers and fighters appeared for the first time in raids against England. ¹ At first the Italian bombers crossed the Channel under cover of German fighter escort and then, growing bolder, under escort of their own fighters. It proved a costly intervention and after a fortnight's operations the Italian force was withdrawn. On 11 November, after an unusually intensive day's work by his squadrons of No. 11 Group, Air Vice-Marshal Park reported:

The enemy was most active. During the day attacks were directed against London and against shipping off the Essex coast and the Estuary. Italian aircraft were used in large numbers for the first time, unescorted by German fighters. Several formations of Ju. 87s also operated at low level with escorts of Me. 109s at 8000–15,000 feet. The Ju. 87s were variously reported in ragged formations, twenty in vics of

five and two formations of thirteen to fifteen aircraft. It is reported that damage to shipping was slight whereas enemy casualties were high, the Italians suffering heavily.

¹ During October Mussolini had despatched 40 bombers (Br20s) and 54 fighters (CR42s) to bases in the **Brussels** area to take part in the assault on **Britain**. It was, however, more of a political gesture than a serious military effort.

Two attacks in the morning were made by Me109s over **Kent**, with a few enemy aircraft penetrating to the outskirts of **London**. Seven squadrons were despatched to intercept and many combats took place. Then just after midday, about 60 enemy aircraft, Ju. 87s. with Me. 109 escort, attacked shipping off the **Essex** coast and the **Estuary**. Eight squadrons were airborne, four of which had successful combats. An hour later a further attack was made on shipping by about 50 enemy machines, believed to be all Italian. Of the nine bombers, eight were destroyed and the other damaged. Five fighters were also destroyed, one probably destroyed and a further five damaged with no loss to our own squadrons in either aircraft or pilots.

Altogether, on this day 25 enemy machines were claimed for the loss of two British pilots. Subsequently enemy activity was on a more restricted scale and both the fighter sweeps and the attacks on shipping finally petered out early in December. Thereafter the Germans were content to send over single aircraft, usually in cloudy weather, to bomb aircraft factories and similar objectives. These intermittent raids did little material damage but they did have a considerable nuisance value and, for a time, caused a degree of concern and disturbance in industry out of all proportion to their strength.

New Zealand fighter pilots stationed in the south of England at this time were frequently engaged with their squadrons in defeating these various forms of attack. In particular, there were a number of lively encounters with enemy formations intercepted during the November

attacks on coastal shipping. While the Junkers 87 dive-bombers were no match for the British fighters, their escort of Messerschmitts had always to be reckoned with. During an engagement early in the month one New Zealand pilot had just sent a German bomber into the sea when his Spitfire was hit by cannon shell, which tore off part of a wing and wounded him in the arm and leg. He managed to turn on his assailant—a Messerschmitt 109—and drive him off, then landed his damaged machine in a field.

During this same period several New Zealanders shot down Messerschmitt fighters intercepted in sweeps over south-eastern England. Flying Officer J. N. Mackenzie and Pilot Officer E. P. Wells achieved particular distinction while flying with No. 41 Spitfire Squadron based at Hornchurch, the famous fighter airfield in Essex which had suffered heavy bombing attacks during the summer months. Mackenzie had been with this squadron from the outbreak of war and had taken part in the patrols over **Dunkirk**. During the Battle of **Britain** he had led a section with conspicuous success and was now credited with the destruction of six enemy aircraft and a further three probables. On one occasion during November 1940, he displayed unusual audacity by joining three Messerschmitts in formation and shooting one of them down into the sea before they were aware of his presence. Among Wells' achievements was the destruction of one of a formation of enemy fighters which he attacked alone after becoming separated from his squadron during a patrol. He was also the first British pilot to engage the Italian fighters on 11 November as they approached the East Coast. Flying on convoy patrol with his squadron, he had broken away to investigate a patch of oil on the sea when he caught sight of some biplanes in small formations at various heights above him. They came down in diving attacks. Wells avoided them and eventually succeeded in gaining enough height to make the same manoeuvre against several of the Italian machines. He was able to get in a long burst at one Fiat, upon which 'large pieces flew off the front of the engine and the aircraft went down in cloud'.

Among other successful pilots at this time was Squadron Leader Blake, whose exploits included the shooting down of a Dornier and a share in the destruction of another whilst on protective patrol over a damaged destroyer in the Channel. Flying Officers Hayter and Rabone and Pilot Officer Spurdle ¹ each claimed at least one victim in interceptions by their squadrons. One day early in December Spurdle's No. 74 Squadron scored a notable victory by claiming, without loss to themselves, eight of a group of enemy fighters which they pursued across the Channel to **France**. Spurdle saw his victim dive into the sea. No. 74 was led by the famous South African fighter pilot, Squadron Leader 'Sailor' Malan, ² who had served with the Union Castle Line before joining the **RAF**. Malan had already won distinction during the Battle of **Britain** and came to be regarded as the top-scoring fighter pilot in the **Royal Air Force**.

Towards the middle of December 1940 the enemy abandoned attacks in daylight and for the next two winter months his activity was at a minimum, with only an occasional fighter-bomber or reconnaissance aircraft flying over **Britain**. The interception of these intruders was most difficult for the Germans took advantage

¹ Wing Commander R. L. Spurdle, DFC and bar; **Wanganui**; born **Wanganui**, 3 Mar 1918; warehouseman; joined **RNZAF** Sep 1939; transferred **RAF** Jul 1940; retransferred **RNZAF** Jul 1945; commanded No. 80 Sqdn, 1944–45; Staff duty, Admin Plans, No. 83 Group, 2nd TAF, 1945; Wing Leader, No. 39 Wing, No. 83 Group, 1945.

² Group Captain A. G. Malan, DSO and bar, DFC and bar; Croix de Guerre (Bel), Military Cross (Czech), Legion of Honour and Croix de Guerre (Fr); South Africa; born **Wellington**, South Africa, 3 Oct 1910; joined **RAF** 1936; commanded No. 74 Sqdn, 1940–41; CFI, No. 58 OTU, 1941; served with British Air Staff, **Washington**, 1941–42; commanded Central Gunnery School, 1942; RAF Station, Biggin Hill, 1943; No. 19 Wing 1943–44; No. 145 Wing, 2nd TAF, 1944; member of Directing Staff, RAF Staff College, 1945–46.

of every favourable circumstance of weather and topography to elude the defenders. The 'pirate' aircraft would suddenly appear out of the murk of a winter's day, drop their bombs and make good their escape before the anti-aircraft guns and fighter aircraft could come into action effectively. For the fighter pilots, especially those just reaching the operational units, this was an exasperating period in which a considerable amount of effort was expended for little reward in positive achievement. Those stationed in such dreary outposts as the Shetlands led a particularly unenviable existence, and in one squadron based on the Northumberland coast not one of the 14 New Zealand pilots serving with it was engaged in combat between November 1940 and May 1941. Day after day was spent in training flights or at readiness, with only an occasional 'scramble' to intercept a suspected hostile aircraft. The routine convoy patrol, generally regarded as a tedious duty, came to be welcomed as at least providing a possible chance of action against the enemy that they had trained so hard and long to fight.

Those responsible for the air defence of **Britain** experienced no such feelings of frustration. They were, in fact, glad of this respite for they knew that the fighter force available to meet renewed German attacks on a large scale was relatively weak. Indeed, at the end of 1940, barely half the operational day squadrons in Fighter Command were, in the strictest sense, first-line squadrons, while many of the remaining units had only a few pilots fully up to operational standard. At the same time it was necessary to find instructors for the expanding training organisation, while calls were already being made for pilots to be sent to the Middle East.

In the event, the mass attacks made by the Germans in the summer of 1940 were not repeated, as the main strength of the **Luftwaffe** was being husbanded for the Russian campaign. But even so the strength of Russian resistance could not be foreseen; it appeared that the Germans might secure an early decision on the Eastern Front and then turn to renew their daylight attacks in the West. Therefore, advantage was

taken of the period of freedom from such attack to strengthen the fighter force and the organisation upon which its successful operation wholly depended. In 1940 the flanks of the air defence system had stood roughly on the Firth of Forth and Portsmouth. Expansion of the group and sector control system was continued so that, by the middle of 1941, short-range fighters could be operated under close control over almost every part of Great Britain with the exception of north-west Scotland. This development was accompanied by a considerable expansion of the artillery and balloon defences. In addition, the chain of coastal radar stations, in which members of the WAAF did outstanding service as operators and watchers, was extended in an endeavour to provide complete early warning over the western sea approaches and also to deal with the problem of the low-flying raider.

As the year went on, the expanding training organisation was able to provide an increased flow of pilots to keep pace with losses and the postings of men to other commands. In this respect the contribution of the Commonwealth countries was substantial. Pilots trained in **Canada**, **Australia**, and New Zealand were now reaching the **United Kingdom** in increasing numbers and, during 1941, many were posted to reinforce the **Royal Air Force** fighter squadrons. Altogether just over 400 New Zealand airmen served with Fighter Command in the course of that year, the large majority as pilots with operational squadrons, although a few men played their part in various duties in the complex ground organisation. Some of the more experienced pilots also served for a time as instructors in operational training units or as controllers in the fighter operations rooms.

At the beginning of 1941 several New Zealanders who had joined the **Royal Air Force** before the war and survived the early campaigns held senior posts in Fighter Command. Group Captain McGregor, who had led a Hurricane squadron during 1940, commanded a fighter station, while Wing Commander A. E. Clouston was in charge of an experimental unit engaged in devising means of intercepting the night bomber. Wing Commander Isherwood, who had served with Clouston in experimental

flying before the war, was at a group headquarters for some months before leading the **RAF** fighter wing to **Russia**. Nine fighter squadrons were also commanded by New Zealand pilots during 1941. In the early months Squadron Leaders Blake and Jameson continued in command of Spitfire squadrons while Squadron Leaders W. G. Clouston and McLean ¹ each led Hurricanes. Later in the year fighter units were also commanded by Squadron Leaders Aitken, Deere, Gray, Malfroy and Mowat. This second year of war saw the formation, under Squadron Leader Knight, of the first squadron in Fighter Command to be identified with New Zealand. But while this squadron absorbed a certain number of the Dominion airmen serving with the command, the large majority continued to be scattered throughout its units and thus took part in every type of operation, in defence of the **United Kingdom** from enemy attack

¹ Wing Commander J. S. McLean, OBE, DFC; born **Hawera**, 19 Feb 1912; joined **RAF** 1932; commanded No. 111 Sqdn, 1941; Wing Leader, North Weald, 1941; commanded RAF Station, Hunsdon, 1941-42; RAF Station, Catterick, 1943; Staff duty, Organisation, No. 10 Fighter Group, 1944; commanded RAF Station, Preddanack, 1945.

both by day and by night and in the opening stages of the fighter offensive against the **German Air Force**. Fifty-five New Zealanders lost their lives while serving with Fighter Command during this second year of war.

When, in February 1941, the Germans resumed air action by day against the **British Isles**, it was on a limited scale and directed mainly against shipping along the coasts and in the **Atlantic** approaches. Occasional raids on aircraft factories persisted for a short time, but thereafter the only enemy activity over land in daylight consisted of reconnaissance flights and a few 'tip and run' attacks on coastal towns and airfields. However, in conjunction with the enemy's vigorous U-boat offensive, minelaying and the night bombing of ports, the renewed air

attacks on shipping represented a serious threat to British survival, so, from March onwards, Fighter Command devoted an increasing portion of its effort to the protection of coastal convoys. For the pilots this meant flying 'standing patrols' over the ships or else waiting ready in their aircraft for reports of enemy bombers approaching the coast. With the limited number of machines available at any particular point and the short endurance of the contemporary fighter aircraft, it was not possible to provide continuous cover, yet many pilots achieved remarkable totals of hours flown during these months.

The patrols themselves were exacting and hazardous. Ships' gunners were apt to 'shoot first and look afterwards' while a sudden deterioration in the weather could make the handling of a high-performance fighter a difficult business. Moreover, because of the enemy's tip and run tactics, such engagements as did occur were seldom conclusive. Usually the German machine escaped into cloud—that refuge of the pursued, enemy of the pursuer—and pilots could only claim 'some damage' with an occasional 'probable'. Nevertheless the fighter patrols, unspectacular as they were, acted as a useful deterrent and on many occasions ships were saved from actual attack, the bombers being driven off or else forced to drop bombs aimlessly in order to make good their escape. At the same time British merchant ships were being armed and, in particular, armour plate protection given to the gunners, with the result that, as the months passed, attacks on coastal convoys in daylight steadily declined. Meanwhile the desultory raids over land by fighters and fighter-bombers had almost entirely ceased, as with the opening of the campaign against **Russia** in June the German **Air Force** had been forced to adopt a more defensive role in the West. Subsequently the expected release of both fighters and bombers from the Russian front failed to materialise and the British Isles remained immune from heavy air attack. Fighter Command, although still charged with important defensive duties such as the protection of coastwise shipping and the interception of occasional bomber and reconnaissance aircraft, was therefore able to turn towards the offensive over the Continent.

The first offensive patrols by fighters had been flown in December 1940, and during the next six months four main types of operation were gradually developed. First there were sorties with **Blenheim** bombers which attacked targets within fighter range in order to provoke the enemy into accepting combat under less favourable conditions. These soon came to be known as 'circus' operations. At other times in clear weather large formations of fighters went out alone on sweeps over northern **France**, 'trailing their coats' as it were, seeking combat with the enemy. Then, on days when the sky was more overcast, single aircraft or small flights ranged over the same area, darting out from cloud cover to machine-gun airfield buildings, grounded aircraft, artillery and searchlight posts and similar objectives. These latter sorties, known as 'Rhubarbs', supplemented the bombing attacks already being made by aircraft of both Bomber and Coastal Commands on fringe targets.

Offensive operations on a large scale began with a sweep over the coast of **France** by five squadrons of fighters on 9 January 1941. The first sortie with bombers followed shortly afterwards when dispersal pens serving landing grounds near Calais were attacked. Altogether 27 such circus operations were flown during the next six months, the objectives for the bombers including the docks at **Dunkirk**, Calais and Boulogne, a number of airfields, coastal shipping, and industrial plants known to be working for the Germans. In addition more than forty sweeps by fighters without bombers were made during the same period.

Unfortunately, these early offensive operations seldom succeeded in bringing the enemy to action. Indeed, until June 1941, no major fighter battle occurred. The Germans seemed reluctant to accept combat under normal conditions and remained content to pounce on stragglers or otherwise exploit any favourable circumstance of height or weather that arose. This was disappointing, but at least Fighter Command could claim that it had wrested the initiative from the enemy and was forcing him onto the defensive.

From the outset New Zealand pilots, many of them veterans of the Battle of Britain, flew on these various offensive patrols; but with the limited opportunities for combat, few men were able to report successes against the enemy during the early months of 1941. Among those more fortunate was Pilot Officer Spurdle who, after an eventful sortie on 1 March, was credited with the destruction of two Messerschmitts. That day Spitfires from three squadrons had been ordered to sweep from Etaples to Dunkirk, and as they approached the French coast twelve Messerschmitts were sighted flying towards them. The Germans were slightly higher than the British formation. Spurdle got in one of the first bursts, 'pulling the nose of his aircraft up and firing at the leader'. The enemy machine burst into flames and went down. Spurdle's second success came while the Spitfires were retiring across the Channel. He saw his leader being attacked by a Messerschmitt so caught up and opened fire. The German plane was seen to crash into the sea. A few weeks later the same pilot had a further encounter while flying on a small intruder patrol. It was a dull afternoon when, in company with another Spitfire, he crossed the Belgian coast and headed south to shoot up the airfield at St. Omer. Flying back to the coast, Spurdle's aircraft was suddenly hit by machine-gun fire and cannon shells. Part of his controls was shot away and the engine began vibrating badly but he managed to climb into cloud before the German attacked again. On emerging from cover a few moments later, he sighted his assailant just ahead and got in a quick burst. The Messerschmitt went down to crash-land in a field. Spurdle was then able to get his damaged machine back across the Channel.

Squadron Leaders Jameson and W. G. Clouston both led their squadrons in a number of the early offensive operations. Clouston's No. 258 Squadron, in which a majority of the pilots were New Zealanders, had adopted the fernleaf as its unofficial badge, this emblem being painted on the Hurricane aircraft with which the squadron was equipped. For a short time after its formation in November 1940, at a base in Yorkshire, the pilots had been employed in escorting convoys off the north-east coast. There followed a period of three months at Jurby, Isle

of Man, where patrols were flown to intercept German aircraft attacking the north-western ports of the **United Kingdom**, including Belfast. Then had come a welcome change to offensive operations after a transfer to one of the 'front line' airfields in south-eastern England.

Towards the end of May the squadron took part in the largest circus operation that had so far been launched. This was an attack on a Benzole refinery near Bethune by a force of 18 Blenheims, supported by twelve squadrons of fighters. No. 258 was one of the three squadrons of the **Kenley Wing** which acted as close escort to the bombers. The remaining squadrons provided advance and withdrawal cover. After forming up over **Kent**, the Blenheims and their escort crossed the Channel without incident but, as they approached the target, a formation of Messerschmitts attempted to attack the bombers. The enemy were eventually driven off, but further confused fighting developed after the target had been bombed. Clouston and several of his pilots were among those involved in these combats, after which four Messerschmitts were claimed destroyed for the loss of three British fighters and one bomber.

In most of the contemporary operations such encounters as did occur were skirmishes rather than sustained air battles, although so far a slight advantage appeared to rest with the attacking formations.¹ At the same time valuable experience was being gained and the first steps taken towards developing an offensive against the **Luftwaffe** that was later to supplement the attacks of Bomber Command on German airfields and aircraft factories. Two important changes had meanwhile been made in the organisation of the flying units in Fighter Command. The first was the employment of the section of two aircraft instead of three. This was considered more efficient when a formation broke up in the course of combat as pilots could give and receive greater mutual protection. The second change was the more general adoption of the three-squadron wing as a tactical unit, an innovation which had been the subject of lively controversy during and after the Battle of **Britain**. Now, however, with the respite from further heavy daylight attack and

the need to employ large formations on offensive patrols, there were obvious advantages in having three-squadron wings at certain bases in southern England so that pilots who were to fly in these wing formations could live and train together.

In June 1941, with the German attack on **Russia**, it became necessary to check the withdrawal of **Luftwaffe** units to the East and, if possible, to force the return of some of those units already transferred. It was clearly to **Britain**'s advantage to prevent a rapid German victory and, by aiding Russian resistance, gain a respite for the development and expansion of **Russia**'s strength. It was therefore decided to intensify the air offensive—in particular, to increase the number of escorted bombing raids against the industrial area of northern **France**, since it was only in defence of targets in this area that the enemy had so far reacted at all energetically.

A period of greater activity for the fighter pilots in the south of England now followed and by the end of July, in addition to the various other patrols, defensive as well as offensive, no fewer than 46 circus type operations had been flown. In all of these missions

¹ Between 1 January and 13 June 1941, 50 British pilots were lost in daylight offensive operations, while the German records admit the loss of 58 fighter aircraft in active operations over northern **France** during the same period.

large numbers of fighter aircraft took part. On 17 June, for example, when 18 **Blenheim** bombers attacked the chemical plant and power station at Bethune, they were supported by 22 squadrons of Spitfires and Hurricanes. This force was made up of an 'escort wing', a 'high cover wing', and a 'main fighter force'. The last was in three echelons, two of which patrolled off the French coast as the bombers and their close escort returned, while the third made a diversionary sweep over north-east **France**. In addition, two 'support wings' remained on the English side of the Channel, ready to intervene if heavy fighting developed. As

had been expected, the enemy now reacted vigorously. The squadrons of the escort wing were, in fact, engaged almost continuously from the time they crossed the French coast, but they succeeded in their task of protecting the bombers, which attacked their target and returned to England without loss. Twenty-two German machines were claimed as destroyed.

Throughout June and July 1941 many such air battles were fought and the destruction of enemy fighters in large numbers reported. But in the confused fighting, where many aircraft were milling round at the same moment in a small area, there was much honest error and it was impossible to know for certain the result of every individual encounter. There were also the disadvantages inherent in fighting over enemy territory. It now appears that during these two months some eighty German fighters were destroyed for the loss of 123 British pilots. Nevertheless, in spite of this adverse balance, the **Royal Air Force** offensive was imposing a considerable strain on the German fighter squadrons in the West. German records reveal that, by the end of July, their day fighter strength in that area had been reduced by one third owing to losses sustained in meeting the British attacks.

New Zealand fighter pilots—at this time concentrated largely in the squadrons based in the south—took part in all but two of the circus operations flown during June and July. Several experienced pilots led formations in these missions. At the beginning of June Wing Commander Jameson was appointed to lead the No. 12 Group wing of which his old squadron formed part, while Squadron Leaders Aitken, Blake, W. G. Clouston and McLean each led squadrons. In August Clouston went to **Malaya** to form No. 488 Squadron, McLean was appointed wing leader at North Weald in No. 11 Group, and Blake wing leader at Portreath. At the same time Squadron Leaders Deere and Gray, who had flown together during the Battle of **Britain**, each assumed command of Spitfire squadrons in the south of England. Deere had returned to flying in May after periods as a flying instructor and controller in an operations room, while Gray had been with No. 1

Squadron where he had done valuable work as a flight commander and in training new pilots.

The New Zealand fighter squadron under Squadron Leader Knight had begun to take part in offensive patrols over northern France towards the end of June. On the 23rd, when No. 485 participated for the first time, eleven Spitfires flew with the wing led by Jameson as part of the 18-squadron cover for 24 Blenheims detailed to attack a power station and chemical works in northern France. The particular task of Jameson's wing was to patrol between Le Touquet and Hardelot at between 15,000 and 20,000 feet and cover the withdrawal of the bombers and their close escort. The patrol proved uneventful until the fighters turned for home, when they were engaged by a formation of Messerschmitts. Jameson himself was attacked by two of the enemy but, catching one machine in his sights as it broke away, succeeded in shooting it down. Other combats in which New Zealanders were involved proved inconclusive.

Until the end of June the New Zealand Squadron remained at Leconfield, in Yorkshire, sending detachments south for particular operations on five successive days. Then followed a quick move to Redhill, Surrey, where for the next four months the unit flew as part of the Kenley Wing in various types of offensive operations over France. In addition, individual pilots flew convoy patrols and occasional sorties to protect air-sea rescue aircraft and launches. With the long hours of daylight of the northern summer came a period of intensive flying, and although many sorties were uneventful, the continued activity was welcomed by pilots who had found their sojourn in a northern sector of England extremely irksome. During July the squadron took part in 22 of the 30 circus operations flown, with the bombers attacking such targets as industrial plants and power stations in the Lille area, at Bethune and Hazebrouck. On many days the squadron's Spitfires provided close escort, a difficult task particularly in cloudy weather, since it involved meeting the bombers at a fixed time at the rendezvous point, forming up, and then maintaining close contact throughout the flight to and

from the target. Occasionally, however, the role was changed, and the New Zealanders flew as 'forward cover', 'target support', or as 'withdrawal cover' to the bomber force.

On 5 July Flight Lieutenant Wells scored No. 485's first success over **France**. Thirteen Spitfires from the squadron, in company with others from No. 258, led by Clouston, were flying as part of the close cover to **Stirling** bombers in their attack on a steelworks at Lille. As the British formation neared the target area several Messerschmitts approached the bombers. Wells got on the tail of one of them and, after a brief attack, the enemy machine went down and the pilot was seen to bale out. A few minutes later, when the Spitfires were returning to the French coast, he attacked a second Messerschmitt. After a few short bursts the enemy machine caught fire and went spinning down. Three days later, when the squadron was covering the withdrawal of bombers from **France**, Pilot Officer Stewart ¹ intercepted a Messerschmitt over the Channel and shot it down into the sea after a brief engagement. Subsequent missions brought no further successes until the following week, when Wells claimed another victim while the squadron was escorting bombers to Cherbourg. Wells, now commanding a flight, soon became known as 'Hawk-Eye' among his fellow pilots—perhaps not altogether surprising for one who had been a clay-pigeon shooting champion in New Zealand before the war.

No. 258 Squadron flew many offensive patrols over northern **France** during June and July. One of its most successful days was on 16 June when Clouston led the Hurricanes as part of the close escort to **Blenheim** bombers in an attack on targets at Boulogne. German fighters were met as the British formation approached the port and a series of dogfights soon developed. Flight Lieutenant Bush saw two Messerschmitts on the tail of a **Blenheim** which was almost down on the sea endeavouring to shake them off. He dived on one of the German fighters and shot it down into the Channel. The other then turned away and the **Blenheim** escaped. About the same moment an English pilot from the squadron sent a second Messerschmitt down but was himself forced to bale out of

his damaged machine during the return flight. He was subsequently rescued from his dinghy. Pilot Officers Dobbyn,² Marshall,³ and McAlister⁴ were among others who reported successful engagements during the brief battle in which the British squadrons claimed eleven German aircraft destroyed for the loss of three pilots. Two bombers also failed to return. No. 258 Squadron was one of the fighter units sent to **Malaya** a few months later, and several of the original New Zealand members were still with the unit during the last flights in defence of **Singapore** before its capture by the Japanese.

Meanwhile, New Zealanders flying with other fighter squadrons

¹ Pilot Officer C. Stewart; born **Wellington**, 22 Nov 1916; clerk; joined RAF Jul 1940; killed on air operations, 11 Jul 1941.

² Flight Lieutenant H. A. Dobbyn; born Dublin, 12 Aug 1919; clerical cadet; joined **RNZAF** Dec 1939; killed on air operations, 25 Feb 1942.

³ Flying Officer G. M. Marshall; born Marton, 5 Jul 1918; farmer; joined **RNZAF** Dec 1939; killed on air operations, 30 Jul 1941.

⁴ Pilot Officer B. A. McAlister; born Lumsden, 5 Jan 1918; stock clerk; joined **RNZAF** Jan 1940; killed on air operations, 4 Apr 1942.

on offensive patrols over northern **France** had been in action. In the course of 22 sorties within a month, Sergeant Grant¹ was credited with the destruction of two Messerschmitts and the damaging of several others. A contemporary report describes how, on one occasion, he became momentarily separated from his squadron during an attack on the airfield at St. Omer. He noticed two Messerschmitts below him, set about them and saw one go down into the ground in flames. Grant, a recent arrival from New Zealand, was at this time flying with No. 145

Spitfire Squadron of the [Tangmere Wing](#). A few months later he joined the Dominion squadron with which he was later to win outstanding distinction as a fighter pilot and as squadron commander.

Flight Lieutenant Hayter had several successful combats while flying with No. 611 Squadron. He had begun his operational career with a bomber squadron early in 1940. Then he transferred to fighters and during 1941 was commended for the initiative and skill which he displayed in leading his flight and, on occasion, his squadron in offensive operations over [France](#). He was later to win further distinction in command of a fighter squadron in the Middle East.

Flying with No. 74 Squadron, Flight Lieutenant Carlson ² and Pilot Officer Sandman ³ had a number of lively engagements. Towards the end of June both men were twice involved in dogfights on the one day. In the initial stages of one combat Carlson's machine was badly hit but, by skilful manoeuvring, he was able to turn sharply upon his adversary and shoot him down into the sea. Sandman came out of his encounters with a 'probable' and one 'confirmed' which his leader saw spin down and crash. On this occasion his squadron was covering Blenheims attacking the marshalling yards at Hazebrouck, and the enemy's reaction was somewhat stronger than usual. Unfortunately Sandman was one of several pilots lost during a sweep over [France](#) a few days later and was taken prisoner. Carlson continued flying and later served with distinction in the [Middle East](#).

Sergeant West, ⁴ who was with No. 616 Spitfire Squadron, flew many patrols alongside the famous legless [RAF](#) pilot, Wing Commander

¹ **Wing Commander R. J. C. Grant, DFC and bar, DFM; born Woodville, 3 Jun 1914; metal spinner; joined [RNZAF](#) Nov 1939; commanded No. 485 (NZ) Sqdn, 1942-43; No. 65 Sqdn, 1943-44; No. 122 Wing, 1944; killed on air operations, 28 Feb 1944.**

² **Wing Commander D. Carlson, DFC; [RAF](#); born Owhango, 4 Oct 1912; joined [RAF](#) 1937; commanded No. 154 Sqdn, 1942;**

RAF Station, Bone, MAAF, 1944; Staff duty, Operations, AHQ
Levant, **Middle East**, 1945.

³ Flight Lieutenant W. J. Sandman; **Auckland**; born
Auckland, 9 Nov 1921; shipping clerk; joined **RNZAF** Jun 1940;
p.w. 27 Jun 1941.

⁴ Squadron Leader J. G. West, DFM; **Hamilton**; born
Palmerston North, 30 Oct 1912; civil servant; joined **RNZAF** May
1940.

Bader, ¹ who frequently led the **Tangmere Wing**. By the end of July West had accounted for at least two enemy machines as well as sharing other victories with his leader. On one occasion he had a narrow escape after his Spitfire had been heavily hit during an encounter with Messerschmitts over northern **France**. West was just able to fly his damaged fighter within sight of the English coast before the engine seized up, forcing him to bale out. He was picked up by fishermen shortly afterwards.

During the same month Squadron Leader Blake had an unenviable experience. He was leading his Spitfire squadron in an attack against enemy ships at Cherbourg when, on the way out from the port, Messerschmitts appeared in strength. In the ensuing dogfights Blake shot two down, but his Spitfire was badly damaged and eventually he was forced to land on the sea. The aircraft sank immediately and it was some seconds before Blake could struggle free and reach the surface.

Remember seeing a seagull pass the wing tip then everything seemed to happen at once. Water flowed over me. Undid the straps and tried to get out but the parachute was holding me into the seat. The instinct was to release the parachute but I stifled the urge as the dinghy was in it. It was very dark and I realised the aircraft was over the vertical and well down so twisted round in the cockpit and wriggled my head and shoulders out. I could see it was lighter in one direction which must be the way up. Kicked off and seemed to rise at an incredible speed. I felt

like a cork as I burst out of the surface of the sea. I inflated the dinghy by turning on the CO₂ bottle and scrambled in. Fortunately it was calm but there was no land in sight. And it was dreadfully quiet. However a slight wind began to blow me steadily north toward the Isle of Wight.

Nine hours later Blake was picked up by a searching launch to find that his successes had been confirmed by other pilots. ²

¹ Group Captain D. R. S. Bader, DSO and bar, DFC and bar, Legion of Honour and Croix de Guerre with Palm (Fr); England; born **London**, 21 Feb 1910; Cranwell Cadet; permanent commission **RAF** 1930; invalided out of **RAF** 1933; rejoined **RAF** Nov 1939; commanded No. 242 Sqdn, 1940–41; p.w. 9 Aug 1941; commanded Sector HQ North Weald, 1945. Bader was involved in a crash shortly after he joined the **Royal Air Force**. Both legs were amputated, one completely and the other at the knee. However, he soon became very skilful in the use of his metal legs and when war came in 1939 he argued his way to a medical board and passed into active service with a fighter squadron. During the Battle of **Britain** he led a Canadian squadron with great success and subsequently, in 1941, led many sweeps over the Channel and northern **France**. On 9 August of that year he was last seen by Sergeant West in hot pursuit of a Messerschmitt which was attempting to dive away from him. He sent the enemy machine down in flames but, whilst pulling up after the attack, collided with another Messerschmitt. Bader escaped from his crippled fighter by parachute and was captured. He was forced to jettison one of his legs which got caught in the controls so a new pair of artificial limbs was dropped for him on St. Omer airfield shortly afterwards.

² Blake adds an interesting postscript. ‘This was the first time the fighter-type dinghy had been used in our squadron and all the pilots thought it was the answer—“ocean-travel made easy”. The next day there were arguments about how to get into it so we all went down to the swimming pool and they each took a dinghy, jumped in and inflated them. They all sank. A chill feeling in my stomach made me realise there was an element of luck somewhere. My dinghy had been kept in the office while the others had been left in the aircraft where they perished. Dinghy

servicing was introduced smartly'.

As might be expected, the large-scale operations did not always run smoothly. Often protection of the bombers in the target area became difficult when their formation was split up by anti-aircraft fire; sometimes there was a time lag at the rendezvous point while, in cloudy skies, maintaining close protection was not easy. Indeed this occasionally produced unpleasant surprises. One day towards the end of July, a Spitfire squadron flying on a circus operation to Lille became separated from the rest of the wing in cloud and later joined up with what they believed to be a formation of British fighters. After flying in company for a few seconds through broken cloud, they found themselves attacked by what was, in reality, a squadron of Messerschmitts.

Throughout August the air offensive over northern **France** was continued on a substantial scale. Twenty-six circus operations were flown during the month in addition to many sweeps involving large numbers of fighter aircraft. There were also roving missions by smaller formations which attacked shipping, port installations, and airfields. The main targets to which bombers were escorted continued to be the steelworks and power stations in the Lille area, together with marshalling yards and airfields in northern **France**. The New Zealand Spitfire Squadron flew consistently throughout the period, frequently taking part in two large-scale operations on the same day; and although at times the only opposition was from anti-aircraft batteries on the coast and in the target area, encounters with enemy fighters were fairly frequent. On 12 August, when Knight led the Spitfires in support of bombers attacking the power station at Gosnay, a formation of Messerschmitts was briefly engaged. Sergeant Rae ¹ drove one of them down, but this victory was marred by the loss of Sergeant Russell. ² A few days later, during a similar mission, there was another brush with German fighters and the squadron was able to claim two damaged without loss. Further successes came on 19 August when Blenheims were being covered in their attack on a power station near Lille. As the Spitfires crossed the French coast, Messerschmitts came down out of the

sun and a sharp engagement followed. One Spitfire was immediately shot down by a German fighter which dived and then came up from below. Then it dived again to repeat this manoeuvre on a second Spitfire, but Rae, the pilot, who had seen his companion shot down, turned sharply towards the enemy as he came up. Defeating the German's attempt to out-turn him, Rae got in an

¹ Flight Lieutenant J. D. Rae, DFC and bar; **Auckland**; born **Auckland**, 15 Jan 1919; clerk; joined **RNZAF** Sep 1940; p.w. 22 Aug 1943.

² Pilot Officer W. H. Russell; born **Manchester**, 19 Dec 1919; clerk; joined **RNZAF** Apr 1940; p.w. 12 Aug 1941; returned to **United Kingdom**, 24 Oct 1943; killed in flying accident 28 Feb 1945.

accurate burst and the Messerschmitt went straight down into the ground. Meanwhile Flight Lieutenant Wells had shot down one Messerschmitt and damaged another. He afterwards reported: 'Dogfights were taking place over a wide area between **Dunkirk** and Calais. I noticed a Messerschmitt closing on a Spitfire slightly below so dived on the enemy machine and opened fire. Black smoke poured out as he turned over and went straight down'. On the same day Squadron Leader McLean claimed one Messerschmitt destroyed and another 'probable' whilst leading his squadron as top cover in an attack on the marshalling yards at Hazebrouck. Another success was scored by Flight Lieutenant J. C. Martin, now flying as a flight commander with No. 222 Spitfire Squadron. Martin, who had joined the **RAF** in 1937 and flown with bombers in the first year of the war, had been one of the original members of the New Zealand fighter squadron. He was to lose his life a few days later in combat over **France**.

Towards the end of the month two further victories came to No. 485 Squadron, Sergeant Sweetman ¹ and an English pilot each reporting successful combats when their formation was attacked whilst returning

across the French coast. In the same engagement Sergeant Griffith's ² machine was badly damaged and he was forced to bale out only a few miles from the enemy shore; but his luck held and he was picked up by a British rescue launch within an hour. Altogether the squadron had been fortunate in losing only four pilots during the month since, as the enemy gained more experience in repelling the British attacks, his opposition had become more effective. With improvements in the German warning system, ³ the British formations now frequently found Messerschmitts above them when they crossed the French coast and the balance of advantage began to turn against Fighter Command. In August 98 British fighter pilots were lost for the destruction, according to German records, of only 33 enemy machines.

These heavier casualties brought consideration as to whether the offensive should be continued, since it was known that the attacks had not succeeded in forcing the return of German fighter units from the Eastern Front and could not now be expected to do so. However, it was agreed that the offensive should be maintained

¹ Squadron Leader H. N. Sweetman, DFC; **Auckland**; born **Auckland**, 10 Oct 1921; clerk; joined **RNZAF** Apr 1940; test pilot, Hawker Aircraft Ltd., 1943–44; commanded No. 3 Sqdn, 1944–45.

² Flight Lieutenant L. P. Griffith, DFC; England; born **Levin**, 3 Mar 1922; student; joined **RNZAF** Apr 1940.

³ At the beginning of the year the Germans had possessed no elaborate defensive system in northern **France** such as existed in southern England, but under stress of the Royal **Air Force** offensive they had developed a chain of radar and reporting stations which gave them, by the autumn of 1941, a fairly efficient warning system. They were then able to broadcast information regarding the approach of the British formations to assist their fighters in making interceptions.

although on a reduced scale. This the declining season was likely to impose in any event. Twelve circus operations were flown in September and a further two in October, the objectives attacked being marshalling yards at **Amiens** and the ports of Rouen, Le Havre and Ostend.

New Zealand pilots flew on all but one of these missions. On 4 September 18 of them were with fighter squadrons which escorted bombers to attack the power stations at Mazingarbe. This was the type of target which the enemy was anxious to protect and he reacted in considerable strength, a total of 75 German fighters being reported airborne on various interception patrols. As the main British force crossed the French coast and flew towards the target, formations of Messerschmitts were encountered and it fell to the pilots of the **North Weald Wing**, acting as close escort, to ward off attacks on the bombers. McLean, who was leading this wing, was able to shoot down one Messerschmitt which he saw overtaking the bomber formation and several of his pilots had similar successes. Most of the enemy's attacks were repelled and only one bomber was shot down. The rest got through to their objective and reported successful bombing, including several direct hits on vital portions of the power plants. Meanwhile, pilots in the other squadrons covering the main operation became involved with the enemy in spirited combat and claimed seven Messerschmitts for the loss of six Spitfires. Flight Sergeant Caldwell ¹ had a remarkable escape during an engagement about ten miles inside the French coast. Endeavouring to outmanoeuvre a group of three Messerschmitts, he was suddenly attacked from behind by a fourth. A burst through the after end of the fuselage shot away elevator cables and damaged the radio. Bullets spattered against the armour plating behind him. The engine was also hit, smoke began to fill the cockpit, and glycol smeared the windscreen. The German then left him as finished but he managed to recover. 'My aircraft went temporarily out of control,' Caldwell afterwards reported. 'But I found that by opening the throttle I could keep the nose up. This was the only thing possible as I had no fore and aft control with the stick.' Eventually he was able to turn for home; he got within ten miles of **Dover** when the engine caught fire and he was

forced to bale out. His plight was observed, however, and he was picked up by a rescue launch after he had been paddling his dinghy for about half an hour.

Spitfires from the New Zealand Fighter Squadron flew on seven of the major operations during September as part of the Kenley Wing, which now included No. 602 Squadron commanded by Deere

¹ Flying Officer T. R. Caldwell; **Christchurch**; born **Mosgiel**, 1 Mar 1914; commercial traveller; joined **RAF** Sep 1939; transferred **RNZAF** Jun 1944.

and No. 452 Australian Squadron. One of the New Zealanders' most successful days was 18 September when, in company with six other squadrons, they escorted Blenheims to bomb a power station at Rouen. On reaching the rendezvous appointed there was some confusion with a simultaneous operation, but eventually things were sorted out and the **Blenheim** formation set off across the Channel with the fighters weaving protectively around them. Apart from heavy flak over the target, no opposition was met until the British aircraft turned for home. Thereupon a large number of Messerschmitts attacked the fighter escort and soon combats were taking place 'all over the sky'. Successes were claimed by Flight Lieutenant Wells, Flight Sergeant Sweetman, Pilot Officer Thomas ¹ and Sergeant Kronfeld, ² but some pilots had to break off combats which might have been conclusive, either to help a companion in trouble or to avoid attack themselves. Altogether British pilots claimed eight enemy aircraft destroyed but six Spitfires were shot down, including one from the New Zealand Squadron.

Three days later Wells led No. 485 Squadron on a similar mission. The Spitfires had just reached the French coast when Messerschmitts attacked from above and the formation became split up. While manoeuvring to attack an enemy machine, Wells noticed that one of his pilots had been hit so turned to protect him. As he did so he was himself attacked from behind. However, a sharp manoeuvre enabled him to get

in an accurate burst on his assailant and part of the Messerschmitt's wing fell off. A few seconds later the pilot baled out. Wells had no time to recover before he found himself beset by four more of the enemy; their attacks were well co-ordinated and his Spitfire was heavily hit. The first pair came in, in line astern, firing as they approached. This forced Wells to turn and face them, but each time he did so he found the other pair had climbed above into the sun and the moment he tried to get clear they dived on him. Eventually one Messerschmitt overshot and gave Wells an opening. After several bursts had found their mark the German fighter turned over, 'bits flew off and it went down burning furiously'. The other three pursued Wells half-way across the Channel before he finally shook them off. In the same mission two other pilots from the squadron, Flying Officers Crawford-Compton and Francis,³ were each able to claim a Messerschmitt as probably destroyed. On 27 September, when **Blenheim** bombers attacked the marshalling yards at **Amiens**, pilots from the

¹ Flight Lieutenant H. L. Thomas; **Auckland**; born **Cambridge**, 7 Oct 1917; accountant; joined **RNZAF** Dec 1939.

² Flight Lieutenant A. S. Kronfeld; **Auckland**; born **Brown's Bay**, 13 Aug 1917; clerk; joined **RNZAF** Jul 1940.

³ Squadron Leader G. H. Francis, DFC; **England**; born **Wigan, Lancashire**, 4 Apr 1916; salesman; joined **RNZAF** Dec 1939.

squadron reported no encounters with the enemy, but Flight Lieutenant J. G. Clouston,¹ who was leading a section of Canadian Spitfires, and Flight Sergeant Fenton,² flying with No. 54 Squadron each became involved with Messerschmitts on the way in to the target. Clouston, after evading the attacks of two enemy fighters, succeeded in driving a third down while Fenton, after shooting away part of the wing of one Messerschmitt, shared in the destruction of another.

In addition to flying many small missions, Spitfires from No. 485 Squadron took part in three of the four circus operations flown during October. On the first occasion the Spitfires were detailed to patrol between **Dunkirk** and Ostend to cover the returning bombers. German fighters were met in some strength, and the squadron claimed three enemy machines as probably destroyed without loss. The pilots concerned were Wells, who was leading the squadron, Flight Lieutenant Strang,³ and Flight Sergeant Rae. Squadron Leader Knight, who was leading the **Kenley Wing** this day, had a narrow escape when, after driving one Messerschmitt down, he found himself beset by two others which continued their attacks to within sight of the English coast. A few days later when Blenheims bombed targets near St. Omer, 15 fighter squadrons, organised in five wings, covered their attack. Two of these wings were led by Jameson and Blake, while Spitfires from the New Zealand Squadron, led by Knight, flew with the **Kenley Wing** as close escort to the bombers. In addition to the usual anti-aircraft fire, the British formations met stiff opposition from enemy fighters, already airborne in considerable strength when they reached **France**. The squadron scored an early victory when, just after crossing the coast, Crawford-Compton saw four Messerschmitts diving on the Australian Spitfires just below. He swooped on one of the German machines and his fellow pilots saw it catch fire and spin down. But almost immediately other enemy formations commenced attacks on the bombers which continued throughout their flight over **France**. As a result, the Spitfires of the **Kenley Wing** were soon involved in combats over a wide area. The experience of Deere's squadron was typical. 'We were repeatedly attacked by pairs of Messerschmitts,' he reported afterwards. 'Saw two Spitfires and a Me. 109 go down. Had to ward off continued attacks during return flight.' At one stage Deere managed to get in short bursts at two

¹ Squadron Leader J. G. Clouston; born **Wellington**, 8 Jan 1919; clerk; joined **RNZAF** Jan 1940; p.w. 6 Jun 1944; reported killed 28 Jun 1944.

² Pilot Officer G. H. Fenton; born **Auckland**, 15 Nov 1921; apprentice engineer; joined **RNZAF** Jun 1940; killed in flying accident, 10 Mar 1942.

³ Squadron Leader J. T. Strang; England; born **Invercargill**, 25 Jan 1914; joined **RAF** Jun 1938; transferred **RNZAF** May 1944; commanded No. 22 Ferry Control, **India**, 1943; CGI No. 1 EFTS, **India**, 1944.

Messerschmitt 109Fs and saw the second turn on its back and then go down vertically after the hood had disintegrated. But although a number of British pilots reported similar successes, bitter fighting took place and altogether nine Spitfires were shot down. One of the bombers was also lost when the protecting wing became split up in combat.

Such losses now became more frequent. During September and October enemy opposition to the **Royal Air Force** offensive over **France** had noticeably stiffened and fairly heavy casualties, amounting to 108 pilots, were inflicted on the attacking squadrons. This loss was certainly not offset by the 43 fighter aircraft which German records show were lost during the same period in resisting the British attacks, more particularly as most of the German pilots who baled out over their own territory lived to fight again. The enemy had clearly increased the advantage which he had regained after British successes earlier in the year. This was confirmed by the results of the last circus operation of 1941, flown on 8 November, when only five German aircraft were claimed for the loss of 14 British pilots. These mounting losses, which coincided with heavy casualties in Bomber Command, brought about a decision to decrease the scale of **Royal Air Force** offensive operations until the following spring. The outbreak of war with **Japan** a few weeks later provided added justification for conserving British air strength, since it was felt that the demands of the **Pacific** war might well mean a reduction in the number of aircraft available for the European theatre.

Although the intensity of the fighter offensive was substantially

reduced during the closing months of the year, New Zealand pilots continued to fly with their squadrons, escorting bombers to attack the Channel ports and enemy shipping in the narrow seas. Ranging further inland under cover of cloudy skies, single aircraft or small formations shot up railway yards, fuel installations, anti-aircraft gun positions and enemy-occupied airfields. The latter 'freelance' sorties offered much scope for individual initiative and original tactics. Pilots were free to attack military targets as opportunity offered, with the result that a railway engine, a minesweeper, and grounded enemy aircraft might be among the objectives reported after a single successful sortie. The air attacks on enemy shipping in the Straits of **Dover**, which had been maintained fairly intensively during the second half of the year, now practically denied this passage during the hours of daylight to the Germans, who were forced to move their convoys through at night or under cover of low cloud—a procedure which exposed them to attack by units of the Royal Navy. Heavy losses had been suffered by the **Blenheim** bombers in their low-level attacks on well-armed convoys, for while the supporting British fighters could usually ward off enemy air attack, they were unable to deal effectively with the German flak-ships, by whose accurate fire many Blenheims were crippled during their bombing run.

An interesting and timely innovation in the air attacks on surface targets at this time was the employment of the Hurricane as a fighter-bomber, this versatile machine ¹ having been adapted to carry two 500-pound bombs slung under the wings. The first squadron to be equipped with the 'Hurri-bombers' was, from the beginning of December, commanded by Squadron Leader Mowat, who had flown in fighter operations from the outbreak of war. Spitfires from No. 485 Squadron escorted the Hurricanes on several of their early missions against such objectives as power stations, enemy airfields, the Channel ports and shipping in the Straits of **Dover**, and in many of these attacks effective bombing was reported. Targets at sea proved difficult to locate at this season of the year, but on one clear day the Hurricanes were able to claim the destruction of a merchant vessel and two escorts in convoy off St. Valery and indeterminate damage to several ships in Boulogne

harbour.

Flying on such operations, with an occasional sweep over **France** as part of a large formation, continued to provide pilots with some relief from the monotony of patrols in protection of coastal shipping which were still a major commitment for the fighter squadrons. However, the onset of the northern winter considerably reduced flying activity so that **Fighter Command**, while preparing for a renewal of the battle for air superiority over northern **France**, had time to review its achievements during the past year. On the defensive side, the night raider had been defeated and the **British Isles** and coastal shipping protected from daylight air attack. The offensive operations over **France** had inflicted fairly heavy casualties and caused the enemy to retain two important fighter groups in the West but, at the same time, they had failed to force him to make any substantial changes in the disposition of his fighter strength. This was disappointing. Yet it is now clear that to have brought about the withdrawal of German squadrons from the Russian front, while it would have been a triumph for British strategy, would have required a much larger effort and greater losses. **Fighter Command**, at a relatively early stage of development and with heavy defensive commitments both at home and overseas, was not able

¹ Earlier in the year Hurricanes had been converted for catapulting from merchant ships. A later development was the fitting of cannon and rocket projectiles. Thus equipped, Hurricanes acted very successfully as 'tank busters' in support of the Army in the **Middle East**, on the Continent and in **Burma**. In fact there was scarcely a theatre of war in which this fine British machine, which had been the mainstay of the defence during the Battle of **Britain**, did not render most valuable service.

to sustain either that effort or the further losses. As it was, a total of 462 British pilots had been lost during the year in daylight offensive operations, almost as many as were killed during the intensive fighting over **France** and **Britain** during 1940.

Nevertheless the **RAF** did retain the initiative in the West, and the blows struck by Bomber and Fighter Commands during 1941 marked the first stage in wresting from the enemy the air supremacy which was necessary before a successful invasion could be attempted. The German Air Force, deeply committed to the support of campaigns in **Russia** and the **Mediterranean**, was now relatively weaker, and the air superiority which it held over the Continent more open to challenge.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

**CHAPTER 12 – HEAVIER BOMBINGRAIDS—ADVENT OF NO. 487
SQUADRON**

CHAPTER 12

Heavier Bombing Raids—Advent of No. 487 Squadron

THE Japanese attack on **Pearl Harbour** which brought the **United States** into the war in December 1941 led to a profound change in the whole war situation. But while eventual victory now appeared more certain, the great resources in manpower and material possessed by **Britain's** new ally were potential rather than actual and would, therefore, take time to organise effectively in action. **Japan**, on the other hand, was mobilised for war and within a few months most of the **Far East** passed under her control. The immediate effect of Japanese intervention was to increase the strain upon **Britain's** military strength and, in particular, upon her still rather slender and widely stretched air power. Reinforcements were needed to defend **India**. At the same time events in the **Mediterranean** were making heavy demands so that, inevitably, the scale of air operations that could be undertaken from the **United Kingdom** during 1942 was adversely affected.

With the **United States** fully pledged to the Allied cause, global strategy was henceforth decided at periodic meetings between the **British Prime Minister** and **President Roosevelt** and their respective military and political advisers. A **Combined Chiefs of Staff Committee** was set up in **Washington** to make recommendations for the conduct of operations and the allocation of available resources between the various theatres of war. Following an immediate decision that **Germany** was to be regarded as the prime enemy, Allied strategy became involved in the search for a suitable offensive and the planning and preparations for a **Second Front** in **Europe**. The issue was somewhat confused by American eagerness to see their troops in action against **Germany** in 1942, the **British** conviction of the impracticability of an early invasion of the **Continent**, and a mutual desire to help the hard-pressed **Russians** by containing German resources away from her **Eastern Front**. As the **Red Army** began to fall back before the fury of the German spring offensive, the need to help the **Russians** became more urgent and, as a temporary alternative to a cross-Channel assault, landings in **North Africa** were

proposed to coincide with a British offensive from Egypt. Meanwhile, priority was to be given to the bombing offensive

from the **United Kingdom** and to fighter sweeps and similar operations designed to draw the enemy fighters into combat. It was felt that a continual and increasing scale of air attack would not only force the Germans to divert men and materials to the defence of the Reich, but might possibly bring about an end to German resistance. In any case, 'an ever-increasing air bombardment' of **Germany** was regarded as an essential preliminary to the contemplated re-entry into **Europe**. However, until such time as a United



BOMBER AND FIGHTER OPERATIONS, 1942
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States Air Force could be built up in **Britain** (and there was to be a considerable diversion of its strength to North Africa), Bomber Command of the **Royal Air Force** remained the only weapon at the disposal of the Allies for striking directly at **Germany** itself. Yet it was a weapon that was proving most difficult to employ effectively. The strength of the enemy defences, in particular his powerful fighter force, made it impracticable to depart from the policy of attacking almost entirely by night. But as was already evident, night bombing, in the absence of navigational aids, was often inaccurate and the choice of targets restricted. Indeed it was only as a result of constant effort and experiment, involving heavy

sacrifices, that the aircrews, aided by the scientists, were eventually able to overcome these limitations.

At the beginning of 1942 Bomber Command was further handicapped by a serious deficiency of trained crews and a shortage of suitable aircraft. Nor did this situation quickly improve. The anticipated increase in the Command's numerical strength did not take place, and the number of sorties flown during 1942 rose only slightly above the total for the previous year. Allied plans for the bombing offensive against **Germany** in 1942 were, in fact, largely frustrated by the heavy demands upon British and American aircraft production to reinforce the **Middle East** and to defeat the renewed attacks of the German U-boats upon the vital sea communications between the American continent and **Europe**. However, while the numerical increase in the British bomber force was indeed small, its composition steadily improved as more squadrons were re-equipped with the new four-engined heavy bombers, Stirlings, Halifaxes and Lancasters, which replaced the Whitleys and Hampdens and later the Wellingtons. This development gave promise of a considerable increase in the weight of attack because of the heavier bomb loads carried by the new types, but, in the meantime, it involved a period of transition that lasted throughout the year; the scale of operations was thus inevitably affected as squadrons had to be taken out of the front line for re-equipment.

The process of 'conversion' to the heavier bombers was no simple matter. It was found that a thorough and complete course of training, often involving forty hours flying together as a crew, was absolutely indispensable for the efficient handling of these more complicated aircraft. At the same time the change to heavier machines brought problems of airfield construction at both the operational and the training units owing to the need for longer runways. By the end of the year, two-thirds of the front-line squadrons had been re-equipped with heavy bombers.

The advent of the Lancaster, which began operating in small

numbers in March 1942, marked what might well be regarded as the beginning of a new era in Bomber Command. It soon proved greatly superior to all other types of night bomber and the advantages which it enjoyed enabled it to attack, with considerable success, distant and difficult targets which other machines could attempt only with serious risk, or even the certainty, of heavy casualties. Furthermore, it was easier to handle, there were fewer accidents, and through the following years the casualty rate of the Lancaster was to be consistently lower than with other types. Altogether it was to show a remarkable efficiency, both in performance and in its ability to carry heavier bomb loads. Eventually, in March 1945, the Lancaster was to carry the enormous 22,000-pound bomb—known as the ‘Grand Slam’—a weapon which no other contemporary aircraft could manage. But at the beginning of 1942 there were no Lancasters operating and no ten-ton bombs. In fact, the average number of heavy bombers available during January of that year was only 47, and the heaviest bomb thus far employed was the 4000-pounder and that only in small numbers.

New Zealand representation in Bomber Command increased considerably during 1942, when a total of 1200 men served among its various units. The majority were engaged on flying duties but there was also a substantial representation in the various ground duties, a particular increase being noticeable in the number engaged on maintenance work with squadrons. Casualties among flying personnel were to be severe—over one-third of the New Zealand airmen who flew with Bomber Command during 1942 lost their lives. The total aircrew losses by Bomber Command in that year were 9850 men killed, missing, or prisoners of war; by December relatively few of those who were flying at the beginning of the year survived. The increasing efficiency of the enemy’s defences was the chief reason for the heavy losses, although the weather, particularly during the winter months, continued to exact a steady toll in both men and machines. There were also serious losses in training flights.

Many of the men who became prisoners of war had remarkable

escapes from death. When the **Stirling** captained by Flying Officer Marshall ¹ was shot down near **Hanover**, the navigator, wireless operator, and flight engineer were killed in the crash. The tail gunner walked out unhurt while the mid-upper gunner and bomb aimer were able to crawl clear, the latter with a broken leg. Marshall was thrown through the front of the machine and was found unconscious beside the burning wreckage. The only survivor from the crew of a Wellington shot down on its flight to **Nuremberg** at the end of August was the New Zealand wireless operator, Sergeant N. J. Mackenzie, ² who records: '.... Suddenly cannon shells ripped through the fuselage, the petrol tanks were hit and our machine burst into flames. The pilot ordered us out as the bomber began to go down. I made for the emergency hatch which at first refused to open. With flames scorching my face and hands I jumped on the hatch and out I went. My parachute opened at once and the blazing aircraft circled me before it crashed.' From

¹ Flight Lieutenant R. Marshall; Hastings; born Pongaroa, 20 Jun 1921; aerial mapper; joined **RNZAF** Jun 1941; p.w. 17 Dec 1942.

² Warrant Officer N. J. Mackenzie; Tai Tapu, **Canterbury**; born Greenpark, 12 Nov 1914; hotel proprietor; joined **RNZAF** Jan 1941; p.w. 28 Aug 1942.

another bomber shot down near **Aachen** early in October, the wireless operator, Sergeant Giddens, ¹ was the last member of the crew to bale out. The rear gunner had been killed by fighter attack and the captain and engineer were unable to escape before the aircraft crashed. Giddens, who was wounded in the leg and shoulder, landed heavily on a concrete road and was unconscious for a time. When he recovered he sought cover and then, after obtaining food from a passer-by, made his way across country for six days before he was captured. Sergeant Powell, ² the bomb aimer, his captain and one of the gunners were the only survivors when their **Stirling**, badly damaged by night fighter attack, crashed into the North Sea. Powell, who was wounded, had been pulled

into the dinghy after the aircraft sank. The three men drifted for three days in rough weather before they were picked up by a Danish trawler. They were captured when the trawler was stopped and searched by a German patrol boat. Sergeant Hyde,³ whose machine went down near St. Malo, walked for eight days southwards, obtaining food and clothes from peasants as he journeyed. Eventually he got a bicycle and made towards **Paris** but became ill from lack of food. He was sheltered by a French family, only to be betrayed with his hosts and arrested. A few months later, along with three other prisoners, he almost succeeded in stealing an enemy aircraft, but was caught when about to take off. The Germans treated this escapade as an act of sabotage and meted out severe punishment. The prisoners were still serving their sentence when liberated in January 1945. On its return flight from a December raid on **Munich**, the Lancaster in which Flight Sergeant Shepherd⁴ was navigator was attacked by a night fighter and set on fire. Efforts to subdue the flames failed and only four of the crew were able to escape from the burning machine before it crashed. Shepherd landed in a farmyard in **Belgium** and made his way across country towards **France**, only to be captured five days later when he was forced by cold and hunger to seek help. Similar experiences befell many other men who were able to escape from aircraft which had been crippled by anti-aircraft fire or by fighter attack.

Among the New Zealanders serving with Bomber Command at the beginning of 1942 were a few survivors from those who had joined the **Royal Air Force** before the war. Most of these men had

¹ Warrant Officer D. C. Giddens; **Waihi**; born **London**, 15 May 1919; grocery assistant; joined **RNZAF** Apr 1941; p.w. 11 Oct 1942.

² Warrant Officer C. A. Powell; **Wellington**; born **Ashburton**, 31 Jul 1916; machine mechanic; joined **RNZAF** Aug 1940; p.w. 18 Aug 1942.

³ Warrant Officer G. M. B. Hyde, MBE; **Wellington**; born Kaikoura, 21 Feb 1922; school teacher; joined **RNZAF** Jun 1941; p.w. 6 Nov 1942.

⁴ Warrant Officer J. A. Shepherd: **Christchurch**; born **Christchurch** 25 Aug 1917; clerk; joined **RNZAF** Nov 1940; p.w. 21 Dec 1942.

now attained senior rank and held positions of leadership in the command. The outstanding personality was Air Vice-Marshal Carr, who continued as Air Officer Commanding No. 4 Group of heavy bombers which was to play a prominent part in the offensive against **Germany** during this period. Group Captain McKee remained in charge of the operational base at Marham, while Group Captain Elworthy served at Headquarters Bomber Command. Group Captain G. T. Jarman commanded an operational training unit throughout the year, and his cousin, Group Captain L. E. Jarman, was in charge of RAF Station, Litchfield. Group Captain Olson, after a period in command of No. 75 Squadron, took over the operational station at Oakington, and Group Captains Barnett and **Kippenberger** commanded other bases.

During 1942 several **RAF** bomber squadrons were also led by New Zealanders. Wing Commander Freeman continued to command the Wellington squadron which he had led with distinction during the previous year, while Wing Commander Dabinett, ¹ after a period as chief flying instructor at an operational training unit, was appointed to command a Wellington squadron. Wing Commanders Cook ² and Seavill were both to command squadrons during the second half of the year, Seavill taking charge of No. 487 New Zealand Squadron upon its formation in August 1942 as a light bomber unit. Others were also to serve as flight commanders in a number of **Royal Air Force** squadrons and as instructors in the operational training units of Bomber Command. In addition some men were employed for varying periods on technical, administrative and staff duties. Two New Zealand doctors with

the **RAF**, Wing Commander G. B. MacGibbon and Squadron Leader J. H. P. Gauvain, both of whom had enlisted before the outbreak of war, served as senior medical officers in Bomber Command during 1942. As in the previous year, a considerable proportion of the New Zealand aircrew was concentrated in No. 3 Group, in which was No. 75 Squadron. Nevertheless, New Zealanders continued to be widely scattered among the units of the other bomber groups and thus took part in almost every operation undertaken by the command.

The light bomber squadrons of No. 2 Group, with which 50 New Zealanders were to serve in the course of the year, had a variety of roles. By night the Blenheims flew intruder sorties, bombing

¹ Group Captain H. I. Dabinett; **RAF**; born Taranaki, 11 Jul 1905; joined **RAF** 1930; commanded No. 115 Sqdn, 1940; No. 12 Sqdn, 1942–43; No. 82 OTU, 1944, and No. 27 OTU, 1945.

² Wing Commander R. N. Cook; born **Invercargill**, 30 Jul 1912; joined **RAF** 1934; flying instructor, No. 15 OTU, 1939–41; commanded No. 156 Sqdn, 1942; deputy commander **RAF** Station, Hemswell, 1942–43, and **RAF** Station, Faldingworth, 1944; Air Staff, Operations, No. 33 Base, No. 3 Bomber Group, 1945.

German night fighter aerodromes in an effort to limit activity against the main bomber force. By day the attacks were usually made in collaboration with Fighter Command, when the primary object was to draw up and engage that portion of the German fighter strength still based on the Western Front. Previous experience had shown that the enemy fighters were much more prone to oppose attacks in which bombers were involved than those in which fighters only were employed. The light bombers, therefore, acted as decoys. The choice of targets was limited by the range of the fighter escort to the Pas de Calais and the coastal areas of northern **France**, **Holland**, and **Belgium**, but within these regions there were important military objectives such as

marshalling yards, power stations, ports and factories which the Germans could be stung into defending. There were also attacks on enemy shipping off the Belgian and French coasts.

In these daylight missions the **Blenheim** was gradually replaced by the faster **Boston**, a twin-engined light bomber built in the United States, and formations of from six to ten of these aircraft were usually employed, along with a strong escort of fighters. Although the scale of the bombing was not heavy, it proved sufficiently accurate to force the German fighters to attempt interceptions on many occasions; but escorting Spitfires were usually able to repel the attacks and relatively few Bostons were shot down. Yet the Bostons did not often return unscathed for many of their targets were strongly defended by anti-aircraft batteries. During one attack on the docks at Le Havre, the **Boston** captained by Flight Lieutenant Wheeler, which was leading a formation, was hit and one of the engines put out of action. Wheeler was just able to reach the English coast where, as the bomber was losing height rapidly, he was forced to crash-land. In another attack on **Dunkirk**, one of the bombers was hit as it approached the Belgian coast and the captain, Pilot Officer Brewer,¹ wounded in the thigh. He carried on, bombed his target and then, despite severe pain and loss of blood, managed to regain formation and return to his airfield where, the brakes of the aircraft being useless, he ran it to a standstill through a dispersal area before collapsing at the controls. Apart from these bombing raids with fighter escort, the Bostons occasionally flew air-sea rescue missions. During the second half of the year they also made a number of unescorted sorties, diving out of cloud to attack coastal targets and returning to such cover for the homeward flight.

¹ Flying Officer G. W. Brewer, DFC; born Hihitahi, **Wanganui**, 8 May 1915; clerk; joined **RNZAF** Apr 1941; killed on air operations, 12 Jun 1943.

On 17 August 1942, during the commando raid on Dieppe, Bostons from No. 2 Group did valuable work in laying smoke screens to cover

both the assault and withdrawal. Flying Officer Rutherford ¹ flew as navigator in the leading aircraft of the formation which made the first sortie of the day, upon the accuracy of which a great deal depended. It involved flying low over the enemy defences, and the Bostons had a hot reception. 'Nevertheless,' declares an official report, 'Rutherford navigated his captain to the target accurately and the bombs were dropped on the position within a few seconds of the time scheduled.' On the same day another navigator, Pilot Officer Baxter, ² flew in the leading aircraft on two bombing sorties against enemy batteries—small targets difficult to locate in the smoke of the ground battle. Baxter had previously flown with distinction as leading navigator in many circus operations, and had already completed over sixty operational sorties.

In August 1942 No. 487 New Zealand Squadron was formed in No. 2 Group under Wing Commander Seavill. Equipped with Ventura light bombers, nicknamed 'flying pigs' because of their spacious body, the unit was first based at Feltwell, which, by a happy coincidence, was the station from where No. 75 Squadron had begun operations against Germany early in 1940. Feltwell was now commanded by **Group Captain Kippenberger**, whose cheerful personality and leadership were largely responsible for the fine spirit which existed there during this period when an Australian squadron was being formed alongside the New Zealand unit.

From the beginning No. 487 Squadron had a strong Empire representation for, in addition to the New Zealanders, there were men from the **British Isles** as well as several Canadians and Australians among the aircrew. Most of the ground and administrative staff were from the **Royal Air Force** but several New Zealanders were among those employed on maintenance duties during the early months. Others were to follow.

The first flight commanders were Squadron Leaders Trent and Wheeler, both airmen with considerable experience. Trent had joined the **Royal Air Force** in the late thirties and during the early months of the

war had served with a Fairey Battle squadron in **France**; then in May 1940 he flew with a **Blenheim** squadron in bombing attacks against the advancing Germans. He was one of the few survivors from his unit. Early in 1943 he was to lead No. 487 Squadron in a daring low-level daylight attack on a power

¹ Flight Lieutenant R. S. Rutherford, DFC; **Tauranga**; born Edinburgh, 16 May 1909; farm manager; joined **RNZAF** Nov 1940.

² Flight Lieutenant A. C. Baxter, DFC and bar; MP (1946–49); **Huntly**; born **Egmont Village**, 19 Aug 1911; shepherd; joined **RNZAF** Mar 1940.

station at **Amsterdam**, winning the Victoria Cross for his courage and fine leadership against heavy odds. Wheeler had enlisted in **Canada** at the outbreak of hostilities and during 1941 had served with a **Blenheim** squadron in daylight raids and attacks on shipping in the North Sea. Subsequently he flew **Bostons** in many of the low-level bombing raids during 1942, including the air attacks on Dieppe in August.

In the early weeks crews were formed and training commenced with aircraft borrowed from a neighbouring unit previously equipped with Ventura aircraft. Eventually, towards the end of September, the squadron began to receive its own machines and, with the arrival of more crews, the unit began to take shape. Training was intensified and within two months most crews were ready to undertake their first operational mission. This was a combined attack on the Philips radio and valve works at **Eindhoven**, in **Holland**, responsible for nearly one-third of **Germany's** supply of radio components. No. 487 Squadron contributed 16 aircraft to the mixed force of 90 fast light bombers—**Bostons**, **Mosquitos** and **Venturas**—which, after several days' wait for reasonable weather, took off shortly before midday on 6 December on what was to prove the most outstanding operation by No. 2 Group for the

whole year.

Visibility over the North Sea was bad, particularly in the heavy rain squalls, and at times cloud was down to 200 feet, but almost the whole force, flying in low over the Dutch fields and villages, succeeded in locating the objective. The attack lasted ten minutes. First the Bostons swung in, then the Mosquitos, followed closely by the Venturas carrying both incendiaries and delayed high-explosive bombs. The last crews reported many fires and billowing smoke in the target area, and subsequent reconnaissance confirmed that heavy damage had been inflicted on the factory. But both in the vicinity of **Eindhoven** and during the return flight, the bombers were harried by German fighters and many combats developed. There was also anti-aircraft fire along the route as well as in the target area. In all, 13 aircraft were lost, three from No. 487 Squadron, including the Ventura piloted by Wing Commander Seavill which went down in flames over an airfield in **Holland**. Many machines returned bearing scars of combat and several had wounded among their crews. There were also some narrow escapes. One New Zealand pilot saw the machine a few yards to his starboard blown to pieces. Another Ventura was hit by anti-aircraft fire which set off some Very cartridges, filling the machine with smoke before they were finally extinguished. A New Zealand flight sergeant had the nose of his aircraft damaged when it struck a tree while he was trying to get away at low level after bombing.

Of the daylight raids attempted by the heavier bombers during 1942, the most spectacular was that made on 17 April by twelve Lancasters against the Diesel engine works at **Augsburg**, in Bavaria. This was one of the largest factories in **Germany** manufacturing power units for U-boats, but to reach it the Lancasters had to fly over 1000 miles across enemy territory. It was a daring enterprise against a target of high military importance. The first wave of six aircraft was attacked soon after crossing the French coast and four were shot down. The remaining two Lancasters flew on and reached **Augsburg**, where they met sharp anti-aircraft fire as they swept in over the house-tops. But they stayed the

course and bombed the factory. Then, as the Lancasters turned away, one was hit. It burst into flames and crash-landed. The other, although riddled with holes, got clear and flew back to England, the only one of the six to return. Its pilot, Squadron Leader Nettleton,¹ of Natal, who led the attack, was subsequently awarded the Victoria Cross. The second wave of bombers was more fortunate and reached **Augsburg** without incident, but then three were shot down after bombing their target. Two New Zealanders were among the casualties in this raid. Sergeant Baxter,² second pilot of one of the Lancasters shot down over **France**, was killed when the aircraft crashed. Warrant Officer Kirke³ was navigator in another Lancaster of the same formation which survived the fighter attacks only to be shot down after bombing the target. Kirke became a prisoner of war.

Night raids by the heavier bombers were, however, the main feature of the air offensive throughout 1942, and it was in such operations that the majority of the New Zealanders with Bomber Command were involved. In January and the early part of February, attacks on a somewhat reduced scale were directed mainly against **Brest** in an attempt to inflict further damage on the three German warships sheltering there. On 12 February the *Scharnhorst*, *Gneisenau*, and *Prinz Eugen* were sufficiently seaworthy to make a spectacular dash up Channel to the greater safety of German home ports.

Leaving **Brest** in the early hours, the three ships were not detected until just before 11 a.m. when they were sighted off Boulogne. As the Germans had anticipated when planning the escape, the weather was then deteriorating rapidly. By the time the first wave of

¹ Wing Commander J. D. Nettleton, VC; born Nongama, Natal, 28 Jun 1917; joined **RAF** Dec 1938; commanded No. 44 Sqdn, 1943; killed on air operations, 13 Jul 1943.

² Sergeant L. H. Baxter; born **New Plymouth**, 11 Dec 1918; clerk; joined **RNZAF** Jan 1941; killed on air operations, 17 Apr

1942.

³ Warrant Officer F. S. Kirke, DFC, DFM; Dunedin; born Wellington, 10 Mar 1917; storeman; joined RNZAF Oct 1939; p.w. 17 Apr 1942.

bombers reached a point of interception in the North Sea four hours later, visibility was less than 1000 yards with continuous cloud down to 500 feet. Subsequently conditions became worse, and a high proportion of the crews despatched were unable to locate the German naval squadron in the failing light and heavy rain.

The main role assigned to the bombers was to distract the attention of the ships' gunners while the torpedo aircraft and surface ships were in action. To this end most of the bombs carried were of the type to inflict blast damage as, with the low cloud base, armour-piercing bombs would have had inadequate penetration. Even so, many of the aircraft which found the ships reported that each time they attempted to gain enough height for effective attack they found themselves in cloud and lost sight of their target. Others zigzagged over the presumed track of the ships and saw a target only for a few fleeting moments. There was thick anti-aircraft fire. One Hampden, piloted by Squadron Leader Constance, ¹ was hit whilst approaching the German fleet through the cloud and went into a dive. On breaking cloud, Constance just managed to regain control before his machine hit the sea. One of the German battle-cruisers was then sighted directly ahead and the Hampden immediately attacked, only to be again heavily hit during the bombing run. Another New Zealand pilot, Squadron Leader A. M. Paape, found himself over the ships at 800 feet. He flew on while his gunners opened fire, then he returned to the attack and bombed one of the vessels in the convoy. By the time he had escaped from the fire zone his machine had been hit several times; the bomb doors hung open, all turrets were out of action, petrol was leaking from one tank, and the hydraulics and trimming gear were useless. Although the weather provided an effective screen for the attacking bombers, 15 of the force of 240 aircraft despatched failed to

return and a further 20 suffered damage from flak or in encounters with enemy fighters. In belated attacks the bomber crews did their best, under appalling conditions, in a role for which they were neither trained nor equipped. Meanwhile, gallant attacks by torpedo aircraft of the **Fleet Air Arm** and of **Coastal Command** had been unsuccessful and the German naval squadron escaped in the gathering darkness, although, before reaching port, both *Scharnhorst* and *Gneisenau* were damaged through striking mines laid by aircraft of Bomber Command.

With the threat to Allied shipping represented by the warships in **Brest** now removed, it was possible for the bomber squadrons to resume the full-scale attack on **Germany**. And there was reasonable

¹ Squadron Leader D. S. N. Constance, DFC; **RNZAF**; **Ohakea**; born **Dargaville**, 27 Mar 1913; clerk; joined **RNZAF** Jul 1940.

hope that this might now be attempted with a greater degree of success since a new, non-visual aid to navigation, known as 'GEE', was just being introduced. One of the major problems in bombing operations had been to find more effective methods of aiding the navigator in guiding his aircraft accurately over **Germany** by night in the face of the steadily increasing defences, varying winds, and the presence of decoys and dummies erected for his confusion. Thus far the normal practice had been to compare the estimated position of the bomber as plotted on the navigator's chart with the actual position obtained by observation of landmarks on the ground or, occasionally, by astro-navigation. But bad visibility frequently prevented this being done, while even in fair weather the greater heights at which the bombers were forced to fly made identification of landmarks on the ground extremely difficult. Therefore the navigator was often unable to fix his position with any reasonable degree of accuracy.

Gee was a radar device which, within its range, was expected to provide an accurate check of an aircraft's position, irrespective of the prevailing visibility. The principle upon which it worked was relatively

simple. A master station transmitted a pulse signal while simultaneously another signal was sent by a slave station. The apparatus in the aircraft was able to measure the time difference in the reception of these two signals and show the difference between the aircraft's distance from the one station and its distance from the other. This enabled the navigator to place his aircraft somewhere on a line marked on a chart specially prepared for use with the apparatus. Another set of transmissions from the same master station and a second slave station placed the aircraft on a second line on his chart. The actual position of the aircraft was at the point of intersection of the two lines.

The chief disadvantage of Gee lay in its limited range, for accurate fixes could only be obtained within some 350 miles from the home stations. At the same time, more was expected of this very useful device than it could, in fact, achieve since it was anticipated that it would also be used for blind bombing, enabling bombs to be released accurately without sight of the target. In the event, the problem of locating the aiming point in bad conditions remained unsolved. However, until the Germans began effective jamming of the transmissions in August 1942, the new device did prove a most valuable aid to navigation. It enabled a larger number of aircraft to reach the vicinity of their target, making their bombing less scattered. Greater concentration of aircraft in time and space was now possible and this was to become an important counter-measure to the enemy defences. Gee also proved an invaluable aid during the homeward flight, since the accuracy of the fixes increased as the aircraft neared England. The risks that had hitherto faced tired crews were reduced and whereas, in previous years, it often happened that more aircraft and crews were lost by crashing in England on the return flight than over [Germany](#), the number of such casualties became progressively less during 1942.

Coincident with the introduction of Gee, an important change was made in the composition of the bomber crew. This was the introduction of the air bomber to relieve the navigator of certain duties in the vicinity of the target. It was a change that was badly needed, for the

navigator already had the arduous duty of getting the aircraft to within a few miles of the target. Then he had to begin the new and difficult task of trying to spot the aiming point, often before his eyes had time to become conditioned to the darkness. Accordingly, it became the bomb aimer's role to specialise in the art of visual target location, leaving the navigator free to give his full attention to the Gee apparatus as the bomber approached its objective.

On the introduction of the bomb aimer, the position of second pilot was omitted from the crew since, with the expanding and changing force and the high standard required of pilots who were to handle the new heavy bombers, it was found impossible to give the two pilots an equal amount of training unless the whole crew went through almost double the amount of training flights. Instead, the air bomber was given a small amount of training so that he could, in an emergency, take over the controls. Another change made at this time was that only one man was subsequently trained as wireless operator and air gunner; a fifth member of the crew was trained as a fulltime gunner. With this greater degree of specialisation, the operational training units for new crews now developed a thorough course of five months' training, involving some eighty hours' flying, a high standard which was maintained until the end of the war in spite of periods of heavy casualties. During 1942 the work of these units was of particular importance for, in addition to the training of new crews, many medium bomber squadrons were being re-equipped with heavier bombers, which involved the retraining of all their aircrew. Most of the instruction was done by men from operational squadrons in what were euphemistically called 'rest periods' between their operational tours. It was difficult and exacting work and casualties were relatively high.

An outstanding leader, Air Marshal Harris, now appeared at Bomber Command. He became Air Officer Commanding-in-Chief in February 1942, and for the remainder of the war the planning of bombing operations was to be guided by his strong personality. Harris believed implicitly in the potentialities of the bomber as a decisive weapon and

felt that by its use the casualties of the fighting forces on land could be reduced to a minimum and the slaughter of the First World War at Verdun, Passchendaele, and the Somme avoided. He worked tirelessly to secure the means to improve the efficiency of his command, and his tenure of office was to see the development of the Royal Air Force bombing offensive to the massive scale it reached in the last year of the war.

The need to concentrate on area targets was now recognised, and the first directive issued to the new Commander-in-Chief stated that 'attacks were to be directed against the morale of the enemy civil population and, in particular, of the industrial workers'. The Ruhr area was to be given priority. Subsidiary tasks were to attack enemy ports and naval bases and certain specific targets in enemy-occupied territory, mainly factories producing war equipment for the Germans. This adoption of enemy civilian morale as a principal aim was a revolutionary step and one which called for a far greater force and concentration of effort than had hitherto been attempted, together with entirely new bombing tactics and technique. But it was not until the end of 1942, after a period of trial and error, of difficulties and disappointments, that these requirements looked like being fulfilled. ¹ Meanwhile, against a well organised police state such as Hitler's Germany, with a docile population to whom obedience was part of their very nature, the 'morale' bombing of this year was to prove comparatively ineffective.

By the beginning of March 1942 sufficient aircraft had been fitted with the Gee apparatus for it to be employed in operations with reasonable chance of success. No. 75 New Zealand Squadron was among the first units whose aircraft were equipped with the device, another being the Wellington squadron led by Wing Commander Freeman, who had taken a leading part in the early trials of the new navigational aid, 'the success of which,' wrote the Air Officer Commanding No. 3 Group, 'was largely due to his efforts.' Both these units were to take a prominent part in the operations of the next few months.

The tactics now employed in major attacks involved the division of

the force available into three parts. The first portion, navigating with Gee, dropped flares in the target area in order to give a second section, also using Gee, a better chance of seeing the aiming point.

¹ The idea of attacking morale might be described as a counsel of despair based on the previous failure of night bombing,' writes Sir Arthur Harris. 'But it also implied an unbounded optimism, not, indeed, about the strategic effects of a bombing offensive, but about what could be achieved at this moment. Far more was expected of a very small force than was at all reasonable, even if the new Gee equipment should come up to the most optimistic forecasts.'

The latter then dropped incendiaries to start fires that would act as a beacon for the main force. A carefully planned timetable was worked out in an endeavour to secure continuity of illumination. At the same time efforts were made to get as many bombers over the target in the shortest possible time, ¹ so that fires should spread rapidly and hinder the work of the civil defences. Raids became short and sharp. Whereas in the previous year an attack by some two hundred aircraft extended over several hours, on 30 May 1942 a thousand bombers attacked **Cologne** within the space of 90 minutes.

Between March and June 1942, the principal objectives for the heavier bombers were towns in the Ruhr and the adjacent Rhineland, with **Essen**, the great armament centre of **Germany** and the home of the famous Krupps works, the target for 15 major attacks. Outside the Ruhr, the cities of **Cologne**, **Hamburg**, **Bremen**, **Kiel**, and **Emden**, and the Baltic ports of **Lubeck** and **Rostock** were also subjected to heavy raids. In addition to these attacks on **Germany**, New Zealand airmen with the squadrons of Bomber Command also took part in a number of raids on targets in German-occupied territory. The first major attack of the year was, in fact, directed against such an objective—the Renault motor and armament plant at Billancourt, near **Paris**. On the night of 3 March, in clear weather and bright moonlight, a force of 220 aircraft attacked the

factory, dropping 460 tons of bombs. As the target was almost undefended, the bombers were able to come down low to identify it and a concentrated attack resulted which caused heavy damage. Production was not restored until four months later. Similar targets subjected to heavy attacks were the large motor works at Poissy and Gennevilliers, both in **France**, and the huge Skoda armament plant at Pilsen, in **Czechoslovakia**. Apart from the actual damage inflicted, these raids served to hearten and encourage the various 'resistance' movements in **Europe**, at the same time discouraging those who worked in these factories from collaborating with the enemy.

An interesting and unusual operation was flown by Bomber Command on 28 February 1942, when Whitleys from No. 51 Squadron dropped paratroops at Bruneval, on the French coast near Le Havre, to capture vital parts of the radar apparatus installed there. Five of the captains of the twelve Whitleys which took part were New Zealanders—Flight Lieutenant Towsey,² Flying

¹ No easy task as aircraft had to be assembled from bases all over eastern England to rendezvous over the target within the required time limit.

² Squadron Leader C. P. Towsey, DFC; **Auckland**; born **Hamilton**, 2 May 1918; musician; joined **RNZAF** Sep 1940.

Officer Coates,¹ and Flight Sergeants Cook,² Clow,³ and Pohe. There was a bright moon, little cloud and only slight haze, so that the aircraft were able to drop the paratroops almost exactly as planned and the raid proved a complete success. The apparatus was dismantled and carried to a small cove, where, together with the men and their prisoners, it was embarked on ships of the Royal Navy. Casualties among the paratroops were one killed, seven wounded, and seven missing.

The results achieved in the bombing attacks on **Germany** during the spring of 1942 varied considerably. Although the new navigational aid

proved invaluable in leading more aircraft towards their objective, the success or failure of any particular raid was still largely determined by the conditions crews experienced during their flight over enemy territory and, more especially, in the vicinity of the target. Heavy anti-aircraft fire and the glare of searchlights frequently rendered identification and marking of a target by the leading aircraft extremely difficult. Often the weather intervened to prevent concentration of attack. After one April raid on **Hamburg** few crews reported having seen the target at all, the majority being forced to drop their bombs blindly through dense cloud. An attack on **Essen** during the same month was frustrated by severe storms and icing encountered during the outward flight. Only 40 of the 157 bombers despatched got through to the target.

The least successful raids were those against the Ruhr, where the absence of conspicuous landmarks and the persistent smoke and haze made it comparatively easy for the bombers to go astray. Even on the rare occasions when it was possible to see something on the ground, the whole character of the district, with its bewildering mass of railways, roads, canals, and industrial buildings, made it exceptionally difficult for the navigator to pinpoint his position accurately. Furthermore, the Germans used decoy fires in this region with good effect. On the other hand, the attacks on **Lubeck** and **Rostock**, which were more easily identified and less heavily defended, produced spectacular results, large areas in both towns being completely destroyed by fire. **Lubeck**, a closely built medieval city on an island in the River Trave, was being used as a supply base for **Norway** and the Russian front, while **Rostock**, besides being one of the greater German ports with important submarine building yards, was also the site of the Heinkel aircraft assembly plants. In many of the other German towns attacked the destruction was less extensive

¹ Squadron Leader G. R. Coates, DFC; England; born **Napier**, 26 Feb 1921; warehouse assistant; joined **RNZAF** Sep 1940.

² Warrant Officer A. R. Cook; born Mt. Eden, 21 Mar 1919;

clerk; joined **RNZAF** Nov 1940; killed in flying accident, 19 May 1943.

³ Flight Lieutenant E. Clow, Netherlands Flying Cross; **New Plymouth**; born **New Plymouth**, 27 Feb 1921; storeman; joined **RNZAF** Jul 1940; p.w. 25 Mar 1943.

and more scattered, but there was one notable exception—the city of **Cologne** which, on 30 May 1942, was the target for the first of what came to be known as the ‘thousand-bomber’ raids.

The launching of an attack on this massive scale—contemporary raids usually involved a force of between two and three hundred aircraft—was an experiment to see how far losses could be reduced and better results achieved by saturating the enemy defences both on the ground and in the air. At the same time the Commander-in-Chief hoped to demonstrate what could be done if Bomber Command were given a sufficiently large force equal to the task which confronted it. But getting a thousand serviceable aircraft was no easy matter. It could only just be done by drawing on the training units to the extent of nearly 400 machines and using the whole strength of the operational units, with every aircraft, including reserves, made available for the occasion and crews found for them. The squadrons, which had been slogging hard through the previous months and bearing heavy casualties, received news of the project with great enthusiasm. Work was hastened on all aircraft in the repair sections and scratch crews were raised on stations, using every trained man. Aircrew left sick quarters to fly on this raid and many of the ground staff volunteered to fill vacancies. At first **Hamburg** was to be the objective, but in the late afternoon of the day finally chosen for the attack, ¹ the weather over that city caused a change to **Cologne** where more favourable conditions were predicted.

New Zealand airmen were in many of the crews of the 1047 bombers which took off shortly after darkness fell. On the way across the North Sea they met thick cloud, but this began to break up across **Holland** and

there were clear skies over **Cologne**, which was readily identified by the first arrivals. Those who followed were guided by large and growing fires, and the whole attack proved an outstanding success. Later reconnaissance revealed that over 600 acres, half of it in the centre of the city, were completely destroyed. This was almost equal to the total destruction so far caused by Bomber Command's raids on **Germany**. That much damage was caused to industrial property is confirmed by German police records, which add that 468 people were killed, 5027 injured, and 140,000 had to be evacuated. Nine days after the attack, **Cologne** was still cut off from communication with the rest of **Germany**. But Bomber Command's losses were not light. Altogether, 40 aircraft failed to return and a further 45 were seriously damaged, twelve of these being completely written off.

¹ The initial date fixed for the operation was the night of 28 May but thundery conditions and heavy cloud over the Continent caused a postponement for two nights.

Two nights later many New Zealanders again flew with the bombers despatched against **Essen**, when advantage was taken of the large force assembled at bases in eastern England to launch another attack on a similar scale. But besides the usual industrial haze, crews found low cloud over the Ruhr, with the result that the bombing was spread over a wide area and the results of the attack much less spectacular.

The third of the thousand-bomber raids of 1942 took place on the night of 25 June against the German port of **Bremen**. This city, the second largest port in **Germany**, not only had large submarine building yards but was also an important link in the German transport system. It also housed, among other industrial concerns, the Focke-Wulf aircraft factory. Once again the bombers found the target area obscured by cloud and only a few crews were able to catch glimpses of the ground. The glow on the clouds from the fires started by the first arrivals, navigating with the aid of Gee, formed the chief means of identification for the main part of the force. Scattered bombing resulted in which, however,

considerable damage was done, including the destruction of industrial buildings in the town and part of the Focke-Wulf factory.

More than two or three such blows were needed to produce the cumulative result that might have had decisive effects on German morale and war production. Yet these large-scale attacks had only been made possible by a supreme effort on the part of Royal Air Force Bomber Command. Training had been brought to a stand-still. The casualty rate, both in men and aircraft, was beyond what could be supported from contemporary resources. ¹ It was not until well into the following year that operations approaching this scale could be repeated on frequent occasions. Nevertheless, these heavy attacks, together with the more accurate raids made between March and June 1942, seriously disturbed the **German High Command**. Plans for a rapid increase in the strength of the night fighter force were now made and the Germans were stung into a series of reprisal raids against English towns. This was the period when the relatively undefended cathedral cities of Exeter, Bath, Canterbury, and Norwich suffered considerable damage.

Throughout these months the crews of the bomber aircraft continued to display great courage and determination in their efforts to overcome the difficulties involved in night bombing operations against **Germany**. Rather than turn back, men flew on to their targets in aircraft already damaged in encounters with the enemy defences. Not all of them succeeded in completing their missions.

¹ In the three thousand-bomber attacks, 120 aircraft had been lost and a further 105 seriously damaged.

There were times when crews survived the worst the enemy could do only to find their battered machines unequal to the return crossing of the North Sea. Then tired and wounded pilots were not always able to make a successful landing on the rough water; nor was there any certainty of rescue if they did. On many occasions, however, fine airmanship and grim determination combined to bring damaged aircraft

safely home in the face of all manner of difficulties. One night towards the end of January 1942, one of the Hampdens detailed to attack **Emden** was set upon by two fighters whilst over the target. The first bursts smashed the instrument panel and wrecked the wireless set. Later all members of the crew were wounded, three of them seriously. But before he was hit the rear gunner sent one fighter down; then the pilot, Flight Sergeant Farrow, ¹ who had been wounded in the leg, managed to elude the other German machine and fly his battered Hampden and wounded crew back to England. In so doing he completed a flight of over 300 miles on a dark night almost unaided, most of his instruments being useless and his wounded navigator unable to help him. Two members of the crew died a few days later. Another crew, with Flight Lieutenant Humphreys ² as captain, were fortunate to survive their return flight from **Lubeck** after taking part in the heavy attack on the night of 28 March. Whilst crossing the **Kiel** Canal their machine was suddenly attacked by a night fighter. The first burst of fire ripped through the starboard wing, then a cannon shell pierced the cabin to explode against the armour plate behind the pilot's head. Soon afterwards the mid-upper and rear turrets were put out of action and the gunners wounded. During further attacks the bomber was forced down to 200 feet before Humphreys was able to evade his pursuer and set course for base. On landing, the aircraft was found to be so badly damaged that it never flew again.

With the expanding German night fighter organisation, such encounters were now more frequent. Flying over **Denmark** towards **Rostock** on the night of 23 April, one **Stirling** was attacked by night fighters and so badly damaged that a crash landing in enemy territory seemed inevitable. However, the pilot, Flight Sergeant Runciman, determined to make an attempt at returning across the North Sea, even though he had very little aileron control and two of his engines were damaged. The crossing was made but, on reaching the English coast, fuel was found to be running short. Runciman ordered his crew to bale out while he went on alone

¹ Squadron Leader J. P. Farrow, DFC, DFM; Hauraki Plains; born **Gisborne**, 9 Aug 1918; truck driver; joined **RNZAF** Jul 1940; p.w. 27 Jun 1944.

² Flight Lieutenant A. G. L. Humphreys, DFC; **Auckland**; born Rangiora, 7 Nov 1919; joined **RAF** Jan 1940; transferred **RNZAF** Jan 1945; p.w. 18 May 1942.

to attempt a landing. Another Stirling, one of five from No. 218 Squadron which bombed the distant target of Pilsen three nights later, was attacked by a night fighter shortly after leaving the target and heavily hit. A fire broke out in the middle of the aircraft during the attack and, while some of the crew beat at the flames, the captain, Pilot Officer Lamason, ¹ succeeded in outmanoeuvring his assailant and finally shook him off. He then got his machine safely back to base. Lamason continued to fly with Bomber Command until June 1944 when, while serving as a flight commander in a Lancaster squadron, he was shot down during a raid on railway marshalling yards near **Paris**. He escaped from his burning machine and after seven weeks' freedom was captured by the **Gestapo** and confined for a time in the notorious concentration camp at **Buchenwald**.

There were many grim episodes in which fires were fought and subdued by members of a crew while the pilot sought to evade the attacks of enemy fighters. In the early hours of 28 April a battered Wellington of No. 150 Squadron skidded in to make a belly landing at a base in Lincolnshire. The outward flight to **Cologne** had been comparatively uneventful, but while the Wellington was returning over the North Sea a German fighter made a surprise attack. Fire broke out amidships and spread rapidly, burning away the fuselage as it did so. Before the enemy machine broke away, both the main and tail planes of the Wellington had been damaged, numerous struts were shattered, and the undercarriage rendered useless. The fire was eventually extinguished, but by that time the machine was little more than a skeleton as most of the fabric from the astro-dome to the rear turret had

been burnt away. It was only the fine airmanship of the pilot, Sergeant Law, ² that got the Wellington back across the sea to England.

Many bombers returned badly damaged after the devastating raid on **Cologne** at the end of May. Among them was the Wellington captained by Flight Lieutenant Saxelby, which was attacked shortly after leaving the target. The second pilot was killed immediately, the fuselage set on fire, the rear turret shattered and the gunner wounded. The undercarriage swung down and the bomb doors fell open. To add to the pilot's difficulties, an oxygen tube in the cockpit caught fire and filled the aircraft with choking fumes. The Wellington began to do down. Although barely able to see, Saxelby eventually managed to bring the machine under control, when it was again attacked by a German fighter. It

¹ Squadron Leader P. J. Lamason, DFC and bar; **Dannevirke**; born **Napier**, 15 Sep 1918; stock inspector; joined **RNZAF** Sep 1940; p.w. 8 Jun 1944.

² Flying Officer K. O. Law, DFM; **Cambridge**; born Inglewood, 17 Oct 1916; farmer; joined **RNZAF** Jan 1941.

was only after he had dived almost to ground level that he finally succeeded in shaking off his assailant. He then completed the difficult return flight and crash-landed at base. During an earlier raid Saxelby had had an unusual and harrowing experience when an incendiary bomb from another British aircraft fell into one of his engines and started a fire. This attracted the enemy ground gunners but, by running the engine dry, the fire was subdued and the aircraft got clear. Unfortunately, early in September, his luck failed him during a raid on **Duisberg** when his **Halifax** was attacked by two night fighters and shot down. With the exception of the rear gunner, who was killed in the initial attack, the crew were able to escape by parachute before the bomber crashed and were taken prisoner.

During the raid against **Essen** on the night of 5 June, Pilot Officer Jones, ¹ a navigator, shared with his British crew an amazing series of incidents. Over **Essen** the Wellington was badly holed by flak and a fire started which was extinguished only with great difficulty. Soon afterwards there was a collision with another aircraft, followed almost immediately by a persistent fighter attack; together they caused such damage that the Wellington eventually had to land on the sea. All the crew survived their ordeal and were picked up by a surface vessel next day. A few weeks later Flight Sergeant Moore, ² as captain of a Wellington bomber, had a remarkable escape after taking part in a raid on **Bremen**. Shortly after crossing the Dutch coast on the return flight, his machine was hit by flak in an encounter with three German E-boats. One wing caught fire, and in spite of his efforts to subdue the flames by 'side-slipping', they spread rapidly, burning away a large portion of the fabric. Soon the Wellington began to lose height and had to be brought down on a rough sea. Immediately it struck the water one wing was torn off, the nose went down steeply, and within a few seconds the machine was below the surface. Moore managed to struggle free and follow his navigator out of the escape hatch to find that the rear gunner was the only other survivor. The three men then scrambled into a dinghy and, after spending 37 hours adrift in the North Sea off the Dutch coast, were picked up by British launches.

Of particular interest at this time was the contribution made by the freshmen crews from the training units, who set off over **Germany** in aircraft that were often well past their best to add to the weight of attack in the thousand-bomber raids. One young New Zealand pilot writes of his first flight to **Bremen**:

¹ Flight Lieutenant F. C. Jones, DFC; born **Auckland**, 21 Apr 1908; journalist; joined **RNZAF** Sep 1940; killed on air operations, 15 Feb 1944.

² Flight Lieutenant V. S. Moore, DSO, DFC, DFM; England; born **New Plymouth**, 15 Dec 1912; diesel engineer; joined **RNZAF** Dec

1940.

The old Wellingtons we were flying were ex squadron, and after being in service for some time at the O.T.U. with novices flogging them around on circuits and bumps, they were really worn out. Our particular plane seemed to be from the bottom of the barrel which was scraped for this raid. On the last two cross-country flights we had come back on one engine with the usual ceremony of fire engines and ambulances to greet our landing. But the ground staff worked hard and we left in high spirits. I remember the flak bursts at the coast and the circle we did to avoid them. But there was more to come for this green crew. Our navigator was warning us of the proximity of the target when everything seemed to happen at once. Searchlights flicked on us from every side and flak began to burst all around. We turned away and finally got clear then came in again for our bombing run. Once more we had the searchlights and flak till we felt like a naked fly in a web with a spider approaching from every corner. Finally our bombs were dropped and then the searchlights gradually clawed us down. until luckily we entered cloud and escaped. Apart from worry about our petrol consumption the return flight was without incident. Just when we were getting anxious as to our position, we heard a clear, steady voice giving directions to an aircraft which had been badly damaged. From this we were able to set course to our own base and land safely.

By June 1942 it was evident that there were still several factors militating against the success of night bombing operations. While Gee had partly overcome the initial difficulty of navigating to a selected area, in the last and most important stage of locating the target crews were still dependent on visual methods; and against such heavily defended towns as **Essen**, the flak, the glare from search- lights, and the intervention of night fighters frequently resulted in flares being scattered and further dispersed by the wind. Any such failure by the first arrivals to drop flares and incendiaries over the right area resulted in the following crews being confused by widely scattered flares, fires and enemy decoys. ¹ Furthermore, against a background of industrial haze,

the unshaded flares then in use produced a dazzle effect which crews sometimes found more of a hindrance than a help in locating the aiming point. On a number of occasions the cumulative effect of these weaknesses resulted in the bombing being spread over a wide area. In particular, important targets in the Ruhr remained more or less undamaged because of the virtual impossibility of visual identification through the haze. But against **Cologne**, where crews had the easily recognisable shape of the Rhine to guide them, and in several other attacks on targets similarly situated, a much greater degree of concentration had been achieved than in the previous year, giving hope that vital damage

¹ There had been a steady increase in the number of enemy decoy fire sites, and the Gee apparatus carried by the British bombers was not sufficiently accurate to indicate whether a fire observed in the vicinity of an objective was one started by the first arrivals near the aiming point, or in error at the wrong place, or an enemy decoy several miles away from the target. Only in clear weather or with the assistance of moonlight was there a reasonable chance of success.

would be inflicted on German industrial areas once the difficulties of locating and marking a target under less favourable conditions could be overcome.

* * * * *

The New Zealand Bomber Squadron had flown intensively during these months, particularly from March to June when a total of 450 sorties was despatched on 51 raids, in which the Wellingtons dropped over 500 tons of bombs on **Germany** and German-occupied territory and laid 72 mines in enemy waters. Sixteen bombers were lost in these missions. The number of New Zealanders serving with the squadron increased rapidly, rising from 50 in January to over 100 in June, but the unit retained its Empire character and men from the **British Isles**, **Australia**, and **Canada** continued to fly in many of the crews.

The first major raid of the year in which No. 75 Squadron took part was against **Essen** on 8 March, when ten Wellingtons were despatched. Apart from the usual haze near the Ruhr, the weather was clear and crews reported many fires in the target area after the attack. Searchlights were active and there was considerable anti-aircraft fire, but all the bombers returned without major incident. **Essen** was the target on three further occasions during March, when 30 sorties were flown by the squadron. On each occasion the crews again found the area shrouded in smoke and industrial haze, which made accurate bombing difficult. Only one Wellington was lost in these raids on this well-defended target. This aircraft was hit and set on fire, but the crew managed to bale out before it crashed in flames. Unfortunately, the second pilot was killed when his parachute broke away but the others survived to become prisoners of war. The navigator fell through the skylight of a building in **Duisberg** and hung suspended inside until rescued by a German soldier with the aid of a ladder. During March the Wellingtons also flew in the raids on the Renault works at **Paris** and on targets at **Dunkirk**, Le Havre, and St. Nazaire.

Crews completed their missions under particularly bad conditions on two occasions at the beginning of April. On the night of the 1st, when the marshalling yards at Hanau, near **Frankfurt**, were the main objective, it was bitterly cold and many of the bombers became heavily coated with ice. A week later, on the first of two attacks against **Hamburg**, crews reported thick cloud near the target and thunderstorms over the North Sea. **Essen** was again a principal target for the Wellingtons during this month, attacks being made on four nights without loss. **Dortmund** and the Baltic port of **Rostock**, through which supplies were being sent to the Russian front, were attacked twice. The squadron also took part in the three raids made on **Cologne** during April, suffering further casualties on these missions. On 22 April the Wellington captained by Flight Sergeant Mahood ¹ failed to return, while the bombers flown by Pilot Officer Jarman, ² an Australian, and Flight Sergeant McLachlan ³ both fared badly in engagements with enemy fighters. The attack on McLachlan's aircraft was typical. On the return

flight, the Wellington had reached a position about twenty-five miles from Givet when it was suddenly hit by a long burst from the guns of a night fighter. This initial attack almost succeeded in destroying the bomber. Pilot Officer Fountain,⁴ the second pilot, was killed instantly and the rear gunner, Sergeant Tutty,⁵ seriously wounded. The hydraulic system failed, the undercarriage and flaps dropped, and the trimming tabs would not operate. Both turrets were put out of action, while instruments, including Gee and other navigational aids, were also unserviceable. To make matters worse, the communication system between members of the crew was damaged. Only by exerting all his strength was McLachlan able to control the aircraft. Then, with assistance from the front gunner, he managed to reach base and make a crash landing. In the other aircraft the second pilot, Pilot Officer Nicol,⁶ was mortally wounded, the rear gunner, Sergeant Harris,⁷ killed, and the navigator and wireless operator both wounded.

From another April raid on **Cologne** two of the eleven Wellingtons failed to return. One was captained by Flight Sergeant Thomas,⁸ who survived as a prisoner of war, the other by Wing Commander Sawrey-Cookson, the squadron's commanding officer, who was later reported killed. Sawrey-Cookson, an English pilot with a distinguished record, had led No. 75 Squadron from September 1941 and his loss, together with the increasing casualties, brought that period of depression experienced by many units in such circumstances. The squadron, however, was fortunate in the choice of its new leader, Wing Commander Olson, and it was not

¹ Flight Sergeant T. S. Mahood; born **Cambridge**, 25 Oct 1916; public servant; joined **RNZAF** Dec 1940; killed on air operations, 22 Apr 1942.

² Squadron Leader E. G. D. Jarman, DFC; born Mt. Morgan, **Australia**, 13 May 1915; joined RAAF Sep 1940; killed on air operations, 28 Apr 1944.

³ Flight Lieutenant I. J. McLachlan, DFM; **Christchurch**; born **Masterton**, 26 Nov 1916; school teacher; joined **RNZAF** Nov 1940.

⁴ Pilot Officer C. N. Fountain; born **Napier**, 27 Nov 1918; clerk; joined **RNZAF** Feb 1941; killed on air operations, 22 Apr 1942.

⁵ Warrant Officer D. S. Tutty; **Palmerston North**; born Gore, 22 May 1922; clerk; joined **RNZAF** Nov 1940.

⁶ Pilot Officer T. McR. Nicol; born **Wellington**, 14 Jan 1921; clerk; joined **RNZAF** Mar 1941; killed on air operations, 23 Apr 1942.

⁷ Sergeant R. J. Harris; born **Pukekohe**, 17 Jan 1918; farmer; joined **RNZAF** Sep 1940; killed on air operations, 23 Apr 1942.

⁸ Warrant Officer G. J. E. Thomas; **Masterton**; born **Masterton**, 21 Jun 1918; shepherd; joined **RNZAF** Dec 1940; p.w. 20 Apr 1942.

long before morale was soaring again. Aply assisted by his flight commanders, Squadron Leaders Denton and Newton, ¹ Olson was to lead the squadron through one of the most successful periods of its career. During May a record number of sorties was despatched. In the first week the town of **Stuttgart** was attacked twice and these raids were followed by others on **Essen** and **Mannheim**. On five nights the whole squadron effort was devoted to mine-laying, principally in **Kiel** Bay. This was an innovation for the Wellington crews and marked the beginning of what was to prove a substantial contribution to the war at sea. But the outstanding event of May was the first of the thousand-bomber raids against **Cologne** on the night of the 30th. The ground staff worked unremittingly to ensure that every available bomber could take part and No. 75 Squadron was able to send 23 Wellingtons. With the 20 bombers

from No. 57 Squadron, also at Feltwell, this represented the largest number of aircraft so far despatched from a single base. Crews were elated with the success of the attack and all but one of No. 75 Squadron's Wellingtons returned without major incident. Even better luck attended the squadron two nights later when 20 Wellingtons took part in the second thousand-bomber raid against **Essen**. All got back safely. Cloud over the Ruhr had made bombing difficult but crews reported many fires in the target area following the attack.

During the next weeks the Wellingtons flew in three more raids on **Essen**, which were followed by four attacks on the port of **Emden** and another against targets in the Ruhr. It was while returning from **Essen** on the night of 2 June that Sergeant Hirst,² rear gunner in the Wellington captained by Sergeant Wilmshurst,³ shot down a Junkers 88. This was the squadron's first 'kill' in 1942. The Wellington was about thirty miles from the English coast when Sergeant Sharp,⁴ on watch in the astro-dome, sighted the enemy flying above and about 1000 yards to starboard. Three attacks were repelled before the gunner got in the burst which sent the German machine down in flames. 'He caught fire and seemed to hover,' said Hirst. 'Then he plunged towards the sea and exploded in a sheet of white flame as he hit the water.' Unfortunately jubilation over the destruction of the enemy was tempered by the loss of the

¹ Wing Commander R. J. Newton, DFC; born **Christchurch**, 17 Jul 1916; commercial traveller; joined **RNZAF** Apr 1940; commanded No. 75 (NZ) Sqdn, 1944; killed on air operations, 1 Jan 1945.

² Sergeant R. J. F. Hirst; born **Te Aroha, Auckland**, 5 Apr 1920; farmhand; joined **RNZAF** Oct 1940; killed on air operations, 11 Jul 1942.

³ Sergeant J. C. Wilmshurst; born Stratford, 4 Oct 1916; clerk; joined **RNZAF** Mar 1941; killed on air operations, 11 Jul

1942.

⁴ Sergeant R. E. Sharp; born Warkworth, 6 Oct 1918; labourer; joined **RNZAF** Dec 1940; killed on air operations, 11 Jul 1942.

Wellington captained by Pilot Officer Carter, ¹ who survived as a prisoner of war. Two aircraft also failed to reach base from the attack against **Essen** on the night of 8 June. Their captains were Pilot Officers Murdoch ² and Smith. ³ Further loss was suffered in the attacks on **Emden**, for which a total of 48 sorties was detailed, when on the night of 20 June the Wellington captained by Flying Officer Fraser ⁴ did not return. On the same night Sergeant Wright ⁵ and his crew, on their first operational flight together, had to contend with a surprise attack by a Junkers 88 over the North Sea, on the homeward journey. The enemy's fire was so accurate that the Wellington's propellers were damaged, the petrol tanks holed, the astro-hatch blown away, and part of the fuselage shorn of its fabric covering.

By the middle of June preparations were being made for the third thousand-bomber raid. **Bremen** was selected as the target and the attack was carried out as planned on the night of 25 June, but thin layer cloud, with only occasional breaks, covered the target and the attack was not as successful as had been hoped. Eight crews from the New Zealand Squadron were among those who reached and bombed the **Bremen** area. Their reports indicated that opposition from flak was stronger than in previous thousand-bomber raids. **Bremen** was again the target four nights later, when 16 Wellingtons were despatched. From this raid the bomber captained by Pilot Officer Monk ⁶ failed to return, while another aircraft crashed shortly after take-off and the crew were killed, but these losses were partly avenged ⁷ by Sergeant Philip ⁷ who shot down a Junkers 88 which came in to attack his Wellington as it was approaching the target. The port engine of the enemy machine was set alight and the success was later confirmed by the crew of another aircraft. Other operations in June included sorties against the German naval and

submarine base at St. Nazaire, in the Bay of Biscay, and two minelaying operations in the enemy shipping lanes off the Frisian Islands.

¹ Flight Lieutenant C. W. P. Carter; **Christchurch**; born **Oamaru**, 10 Jun 1920; clerk; joined **RNZAF** Feb 1941; p.w. 3 Jun 1942.

² Pilot Officer G. E. Murdoch; born **Wellington**, 15 Dec 1915; salesman; joined **RNZAF** Mar 1941; killed on air operations, 9 Jun 1942.

³ Pilot Officer R. J. Smith; born Orange, **Australia**, 7 Feb 1916; farmer; joined **RNZAF** Feb 1941; killed on air operations, 9 Jun 1942.

⁴ Flying Officer A. A. Fraser; born **Christchurch**, 11 Nov 1918; clerk; joined **RNZAF** Dec 1940; killed on air operations, 20 Jun 1942.

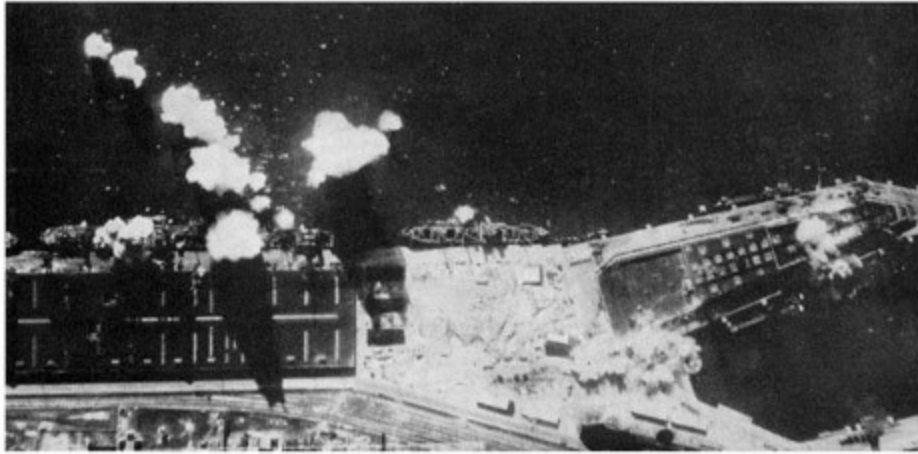
⁵ Squadron Leader J. L. Wright, DSO, DFC; Horotiu; born Tirau, 24 Feb 1914; clerk; joined **RNZAF** Dec 1940.

⁶ Pilot Officer W. J. Monk; born **Wellington**, 18 Jan 1918; insurance agent; joined **RNZAF** Mar 1941; killed on air operations, 30 Jun 1942.

⁷ Flight Lieutenant B. R. Philip; **Christchurch**; born Cheviot, 16 Feb 1921; labourer; joined **RNZAF** Dec 1940.

The squadron's efforts during these months were the subject of favourable comment by the Air Officer Commanding No. 3 Group, Air Vice-Marshal Baldwin, under whom the squadron had served since its formation. He wrote of 'the very fine work which has been carried out, not only by the operational crews, but by the maintenance personnel. It is one of the most successful squadrons within a Group which prides itself on maintaining an operational record unsurpassed by any other

Group in Bomber Command. During the last four months No. 75 Squadron has three times headed the monthly total of operational sorties within the Group—in other words, during these three months they sent out on raids more aircraft than any other squadron. In the fourth month they were second, their total of sorties being only two behind the top Squadron.'



Direct hits on docks and shipping in a daylight raid at Le Havre on 15 October 1941

Direct hits on docks and shipping in a daylight raid at Le Havre on 15 October 1941



The wreckage of a Wellington shot down near Bremen

The wreckage of a Wellington shot down near [Bremen](#)



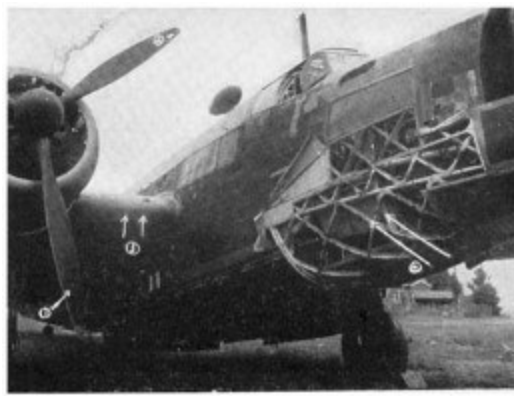
Halifaxes in a daylight attack on German warships at Brest on
18 December 1941

Halifaxes in a daylight attack on German warships at Brest on 18 December 1941



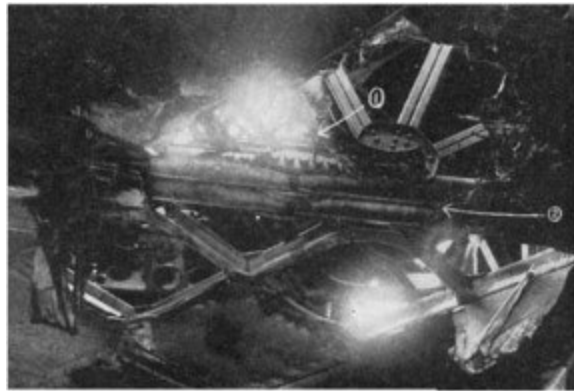
Bombing up a Wellington
of No. 75 Squadron

Bombing up a Wellington of No. 75 Squadron



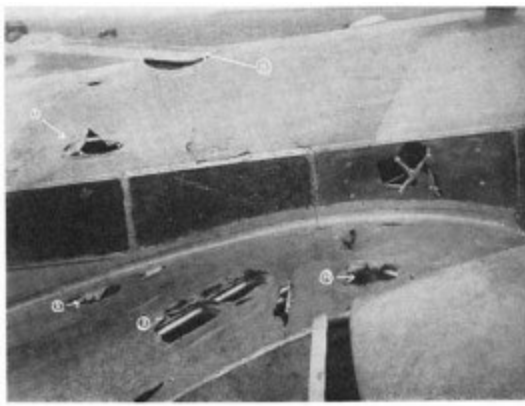
The damaged Wellington showing (1) and (2) bullet holes, (3) shell splinter and bullet holes, (4) result of shell splinters

The damaged Wellington showing (1) and (2) bullet holes, (3) shell splinter and bullet holes, (4) result of shell splinters



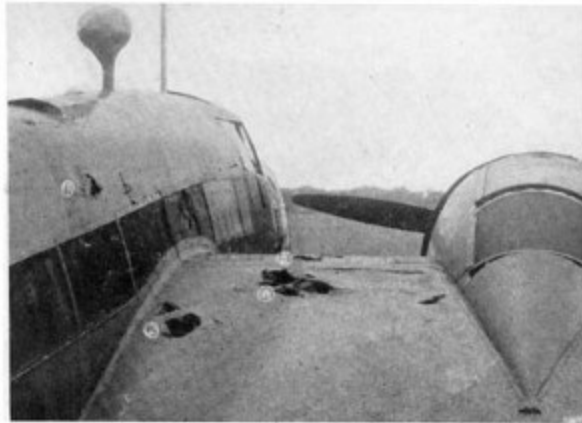
1) self-sealing pipe burnt but internally no damage, (2) damaged spar where shell hit and splinters severed pipelines and controls

(1) self-sealing pipe burnt but internally no damage, (2) damaged spar where shell hit and splinters severed pipelines and controls



(B) Astro-hatch removed by Ward. (1), (2) and (3) footholds kicked in fuselage and centre section to enable Ward to reach fire

(B) Astro-hatch removed by Ward. (1), (2) and (3) footholds kicked in fuselage and centre section to enable Ward to reach fire



(A) Hole made by shell and afterwards by fire, (1), (2) and (3) footholds made by Ward

(A) Hole made by shell and afterwards by fire, (1), (2) and (3) footholds made by Ward



Sergeant J. A. Ward, VC
Sergeant J. A. Ward, VC



The Empire Air Training Scheme—New Zealanders in Canada

The Empire Air Training Scheme—New Zealanders in Canada





Line up of Spitfires subscribed by New Zealand for No. 485 Squadron

Line up of Spitfires subscribed by New Zealand for No. 485 Squadron



Hudsons preparing for Atlantic ferry flight at Gander, Newfoundland

Hudsons preparing for Atlantic ferry flight at Gander, Newfoundland



The combined raid at Vaagso on 27 December 1941

The combined raid at Vaagso on 27 December 1941



An Italian bomber shot down near the east coast of England in November 1940

An Italian bomber shot down near the east coast of England in November 1940



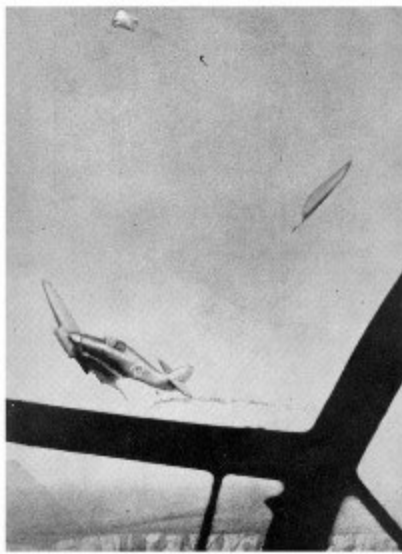
A Hurricane of No. 257 Squadron refuelling in the snow

A Hurricane of No. 257 Squadron refuelling in the snow



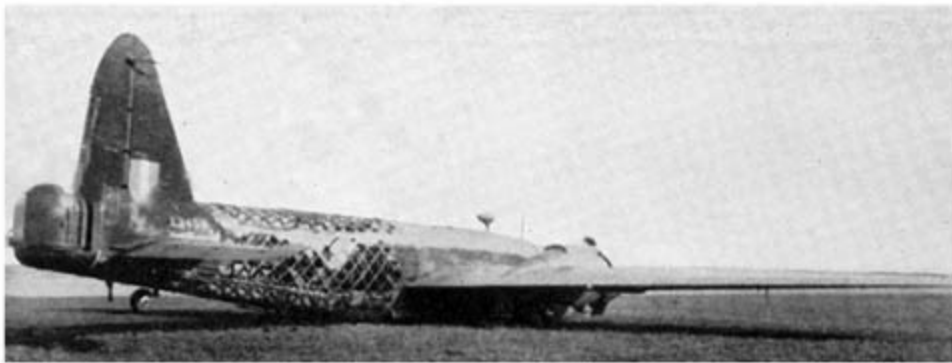
Pilots examine the wreckage of a Junkers 87 in January 1941

Pilots examine the wreckage of a Junkers 87 in January 1941



A German photograph taken over the south coast of England of a Hurricane breaking up in mid-air with the pilot parachuting

A German photograph taken over the south coast of England of a Hurricane breaking up in mid-air with the pilot parachuting



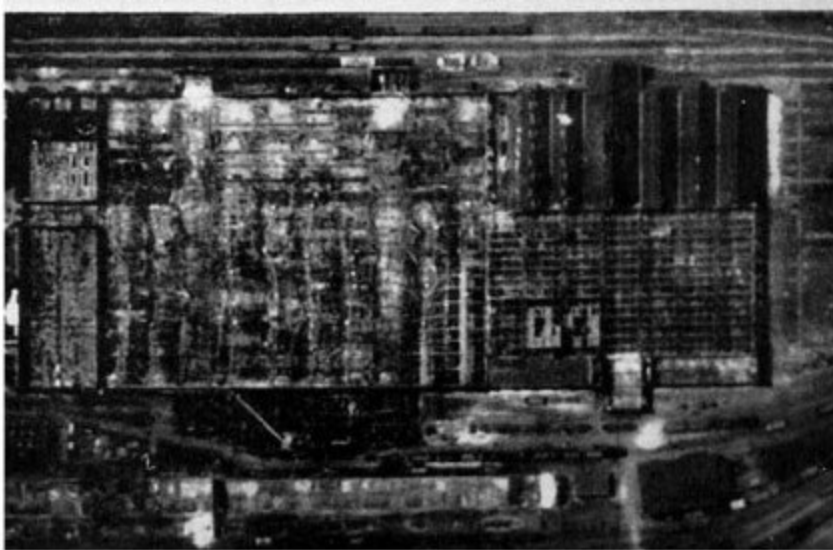
A Wellington, piloted by Sergeant K. O. Law, which returned to base safely though badly damaged by an Me 110 night fighter

A Wellington, piloted by Sergeant K.O.Law, which returned to base safely though badly damaged by an Me 110 night fighter

The railway workshops before and after the 'thousand-bomber' raid of 30 May 1942 on Cologne



The railway workshops before and after the 'thousand-bomber' raid of 30 May 1942 on [Cologne](#)



German officers examine the wreckage of an RAF Stirling shot down over Germany on 29 July 1942

German officers examine the wreckage of an RAF Stirling shot down over [Germany](#) on 29 July 1942



A New Zealand bomber crew of No. 75 Squadron in 1942

A New Zealand bomber crew of No. 75 Squadron in 1942



U-boat under air attack by a Sunderland in the Bay of Biscay
on 5 June 1942

U-boat under air attack by a Sunderland in the Bay of Biscay on 5 June 1942



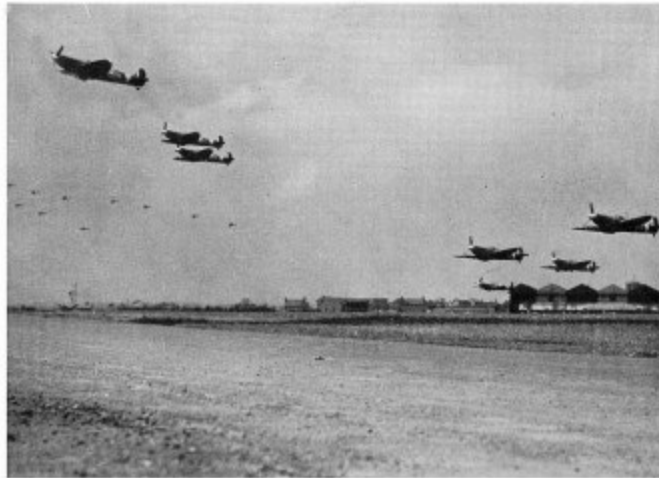
In a dispersal hut at a fighter station as pilots wait for orders
to 'scramble'

In a dispersal hut at a fighter station as pilots wait for orders to 'scramble'



Fighter pilots being briefed for an operation

Fighter pilots being briefed for an operation



View from the control tower as a flight takes off. Other Spitfires are in the distance

View from the control tower as a flight takes off. Other Spitfires are in the distance



Recounting experiences on returning from a sweep over northern France

Recounting experiences on returning from a sweep over northern France



Boston crews being briefed before the Dieppe raid, August 1942

Boston crews being briefed before the Dieppe raid, August 1942



Bombs fall from a Boston in the early stages of the Dieppe raid. Far below British naval craft are laying a smoke screen

Bombs fall from a Boston in the early stages of the Dieppe raid. Far below British naval craft are laying as smoke screen



A street in Exeter on the morning after the heavy German night raid of 24 April 1942

A street in Exeter on the morning after the heavy German night raid of 24 April 1942



Squadron Leader
D. J. Scott

Squadron leader D. J. Scott



The Battle of Britain memorial window in Westminster Abbey

The Battle of Britain memorial window in Westminster Abbey

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 13 – PATHFINDERS AND RAIDS ON ITALY

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Pathfinders and Raids on Italy

BY the middle of 1942 the pattern of future Allied strategy was more clearly defined. The Japanese attacks in **Burma** and the **Pacific** were to be held and an offensive launched in **Europe** against **Germany**. But poverty of equipment, particularly in landing craft, and the short period remaining when the weather would allow such vessels to cross the Channel, ruled out a direct assault on the Continent during 1942. It was also doubtful whether the Allied air forces could achieve and maintain the local air superiority necessary to establish an invasion bridgehead and cover the advance from it. A landing in North Africa was finally accepted as the only operation that could be undertaken immediately with fair prospect of success. Although distant from the heart of **Germany**, such an assault would at least serve to divert some of the pressure from the Red Army and at the same time materially improve the situation in North Africa. But the build-up for a cross-Channel invasion was now inevitably delayed, and it remained for Royal Air Force Bomber Command to continue the direct attack on **Germany**. This aerial offensive could still be sustained only by night but there was confidence that, with the aid of the scientists, many of the problems associated with night raids would soon be solved and the bombing made more concentrated.

During July 1942 major attacks by Bomber Command were directed against **Bremen**, **Wilhelmshaven**, **Duisberg**, **Saarbrücken** and **Hamburg**. The latter raid, on the 26th of the month, was the most successful, daylight reconnaissance confirming crew reports that substantial damage had been inflicted. An attempt two nights later to follow this success with another attack employing the whole resources of the Command was frustrated by deteriorating weather at bases in England. Many aircraft had to be recalled and other sorties cancelled. Better fortune attended a raid by 480 aircraft on the night of 31 July against **Düsseldorf**, on the edge of the Ruhr, almost as important a target as **Essen**. In this and a subsequent attack ten days later the town was as

extensively damaged, in proportion to its size, as **Cologne**. The weather on both occasions was exceptional, with no cloud and little haze in the target area. Only in the later stages of the attacks did smoke from the fires hinder identification of ground detail.

But the thousand-bomber scale of attack could not be repeated, and the weight of these raids in July and August proved insufficient to saturate the enemy's expanding defences. The rate of operational losses, in which there was a sharp increase during these months, showed clearly that the enemy was gaining a considerable degree of tactical superiority as a result of his counter measures. The German anti-aircraft fire, assisted by radar, had become more deadly, and there had been a steady reinforcement of the night fighter squadrons with an increase in the number of their ground control stations. Another significant development was the removal of nearly all the searchlights previously arranged in a belt along the frontier and their concentration in the actual target areas, where they produced such a dazzling effect that it became difficult for the bomber crews to identify ground detail and locate their aiming point. This removal of the searchlights from the frontier caused no hardship to the enemy defence since they were no longer needed to assist air interception. The German night fighters were now being fitted with airborne radar, and they became a greater menace to the British bombers both during the flight over enemy territory and in the actual target area. A deadly form of attack was often adopted in which the fighter climbed steeply until it got under the tail of the bomber. The fighter then opened fire at close range and continued to fire while climbing more steeply. It was extremely difficult to see the enemy's approach against the dark background below the tail of a bomber, and gunners were frequently taken by surprise. A weaving and twisting form of flight was developed as evasive action in which the bomber was repeatedly banked so that the area below it could be searched. But even so the German night fighters continued to take a heavy toll.

By the end of August 1942 it was evident that, in spite of very

determined efforts by crews to find and attack their objectives, the damage being inflicted on German targets was insufficient to compensate for the heavy losses incurred. During the last weeks of that month there came a further serious setback when crews reported that the Germans had commenced jamming the transmissions from the Gee stations in **Britain**, thus depriving the bombers of their most effective aid to navigation. For Bomber Command to recover the initiative several things were urgently needed. First of all, some way had to be found of breaking the very efficient control of the German night fighters by their ground stations. Counter measures had already been devised by the scientists and the main difficulty was in getting the equipment, although there was also considerable concern lest the Germans should turn these weapons against the defences of Great Britain. A second requirement was to secure greater concentration of bombing under less favourable conditions. The essence of this problem was to ensure that the leading aircraft should be able to draw the rest to the aiming point by marking it unmistakably, not merely by fires started with incendiary bombs, since realistic decoys and the jettisoning of incendiaries near the target by aircraft which got into difficulties rendered this method of marking most unreliable. Experiments were already being made, but it was some time before a suitable marker bomb was developed and not until January 1943 was it available for operational use. Nor were the new radar aids to replace Gee ready until the same month.

In the meantime, the idea of having separate target finding units had been accepted, ¹ and the **Pathfinder Force** came into being during August 1942, under the command of an Australian pilot in the **RAF**, Group Captain D. C. T. Bennett. Bennett was a profound student of navigation, with outstanding technical knowledge and operational ability. During the early part of the war he had taken a major part in starting the trans- **Atlantic** ferrying of aircraft. Then he commanded a **Halifax** squadron, was shot down while attacking German warships in a Norwegian fiord, escaped to **Sweden** and, after many adventures, eventually returned to England. His Pathfinder Force was to contain picked crews, highly skilled in navigation and target location, whose

function would be to precede the main force and create for it an unmistakable beacon as a focus for the attack. Certain advantages were anticipated from having these crews in a separate formation. By concentrating on their special role, tactics could be developed more quickly. In addition, the aircraft of the small leader force could be equipped with the first samples of new aids and devices and the advantage obtained by the bomber force as a whole long before production would permit of general distribution.

Existing units which had been experimenting with new techniques of target finding and marking comprised the nucleus of the new force. They were located for purposes of administration on adjacent stations in No. 3 Group but were under the operational control of the Air Officer Commanding-in-Chief, Bomber Command. Initially there were five squadrons, three equipped with heavy bombers, one with Wellingtons and one with Mosquitos,² an arrangement which permitted crews selected from the operational groups to be absorbed into pathfinder squadrons without the delay of conversion to new

¹ Proposals for the formation of a Target Finding Force had been put forward as early as November 1941 as an essential complement to the flare and incendiary technique then being evolved. However, there was strong opposition in Bomber Command to such a step, mainly because it was feared that the 'creaming off' of experienced crews from operational squadrons would have a very adverse effect on the morale of the remaining units in the command. The controversy was finally settled by the intervention of the Chief of Air Staff.

² No. 7 (**Stirling**) Squadron, No. 35 (**Halifax**) Squadron, No. 83 (Lancaster) Squadron, No. 109 (Mosquito) Squadron, and No. 156 (Wellington) Squadron.

types of aircraft. Approximately two-thirds of the crews were obtained by the transfer of experienced men from existing squadrons, the remainder from the best of the current output of the operational

training units. A high standard of operational efficiency, together with such qualities as grit, determination and reliability, were the basis of selection and the members of the **Pathfinder Force** soon came to be regarded as a *corps d'élite*. They received certain privileges, such as accelerated promotion and the right to wear a distinctive badge. The changes brought about by the formation of the **Pathfinder Force** were not, at first, very noticeable, since the practice had been for groups to send off the best crews first in order to improve the chances of the remainder being correctly led to the target. Moreover from the start the pathfinder crews, deprived of the full assistance of Gee, were without suitable devices to assist them in finding their objectives and in marking the aiming point. But as new radar aids became available and experience increased, the value of this picked band of specialist crews operating in the van of the bomber force was proved and a new era in night bombing operations began.

Fifty-five New Zealanders, including several transferred from No. 75 Squadron, flew with the five squadrons of the Pathfinder Force in its first operations during the closing months of 1942, a representation which compared very favourably with that from other parts of the Commonwealth. In the initial stages one of the pathfinder units, No. 156 Wellington Squadron, was commanded by Wing Commander R. N. Cook, a New Zealand pilot who had been with the **Royal Air Force** since 1934, while a prominent part in the formation of the force and the evolution of tactics was played by Squadron Leader A. Ashworth. Ashworth was nearing the end of a third tour of operations, having flown with No. 75 Squadron in 1941 and then on bombing raids in the **Middle East** before returning to England to fly once again with the New Zealand Squadron. Among those who won distinction in their work with the pathfinder units during the pioneering period in 1942 were Flight Lieutenants Barron ¹ and Kearns, ² who flew as captains of aircraft; Flight Lieutenants Ball, ³ Hilton, ⁴ Martin ⁵ and Gray, ⁶ Pilot Officers

¹ Wing Commander J. F. Barron, DSO and bar, DFC, DFM; born Dunedin, 9 Jan 1921; clerk; joined **RNZAF** Jul 1940;

commanded No. 7 Sqdn, 1944; killed on air operations, 20 May 1944.

² Squadron Leader R. S. D. Kearns, DSO, DFC, DFM; England; born Reefton, 9 Mar 1920; student; joined **RNZAF** Dec 1940.

³ Squadron Leader W. A. C. Ball, DFC; born **Palmerston North**, 14 Sep 1916; insurance clerk; joined **RNZAF** Oct 1939; killed on air operations, 9 Mar 1943.

⁴ Flight Lieutenant F. Hilton, DFC; born **Coventry, Warwickshire**, 15 Dec 1918; carpenter; joined **RNZAF** Jan 1941; killed on air operations, 25 Jun 1943.

⁵ Flight Lieutenant B. Martin, DFC; born **Waiiau**, 23 Nov 1911; diesel engineer; joined **RNZAF** Sep 1940; killed on air operations, 2 Feb 1943.

⁶ Flight Lieutenant E. McL. Gray, DFC; born **Cambridge**, 22 Mar 1920; clerk; joined **RNZAF** Dec 1940; killed on air operations, 4 May 1943.

Barclay, ¹ Hamilton ² and Moller, ³ as navigators; Pilot Officer Greaves, ⁴ Warrant Officer Barnham, ⁵ and Flight Sergeants Egerton, ⁶ Sibbald ⁷ and Wallace, ⁸ as wireless operator-air gunners; and Pilot Officer Marshall ⁹ and Flight Sergeant Price ¹⁰ as gunners.

Upon the crews from the pathfinder units now fell the difficult tasks not only of locating and illuminating the target but also of marking the aiming point effectively. The basis of most of the target marking technique thus far employed was visual marking of the aiming point in the light of flares or in moonlight, and at first this was continued by the pathfinder units. But by the end of September tactics had been evolved whereby the pathfinder force detailed for any particular raid was divided into three parts. The first section, designated 'finders', on reaching the

target dropped long sticks of flares right across it. They were closely followed by the 'illuminators', who searched for the aiming point itself and dropped much shorter sticks of flares for the benefit of the 'markers'. These aircraft then came in and tried to release their incendiary bombs on the aiming point, marking its position for the benefit of the main force which was timed to arrive shortly afterwards. As these tactics became established, bombing raids were planned according to a more or less definite pattern, the first phase being the finding and marking of the target by the pathfinder crews, followed by the build-up of the attack by a fire-raising force and, finally, the bombing by the main body of bomber aircraft. Following upon the successful fire raids earlier in the year, the bomb loads now ordered for attacks on German cities almost invariably consisted of a large proportion of incendiaries in addition to high-explosive blast bombs.

¹ Flight Lieutenant W. J. M. Barclay, DFC, DFM; Dunedin; born Dunedin, 13 May 1921; clerk; joined [RNZAF](#) Nov 1940.

² Flying Officer W. A. Hamilton, DFM; Mangaweka; born Mangaweka, 11 Mar 1914; farmhand; joined [RNZAF](#) Sep 1940.

³ Flying Officer J. A. Moller, DFM; Katikati, Bay of Plenty; born [Hawera](#), 31 Mar 1922; garage attendant; joined [RNZAF](#) Mar 1941.

⁴ Flying Officer E. M. Greaves, DFC; Annat, Canterbury; born Waddington, 5 Dec 1919; clerk; joined [RNZAF](#) Oct 1940.

⁵ Warrant Officer J. E. Barnham, DFC; [New Plymouth](#); born [Christchurch](#), 5 Nov 1920; salesman; joined [RNZAF](#) Apr 1941.

⁶ Flying Officer M. W. Egerton, DFM; [Riverton](#); born Winton, 23 Oct 1915; sawmill hand; joined [RNZAF](#) Jan 1941.

⁷ Flying Officer D. A. Sibbald, DFM; [Amberley](#); born

Christchurch, 14 Jun 1922; clerk; joined **RNZAF** Feb 1941.

⁸ Flying Officer L. B. Wallace, CGM; Geraldine; born **Darfield**, 7 Apr 1919; railway porter; joined **RNZAF** Oct 1940

⁹ Flying Officer J. Marshall, DFC; **Christchurch**; born **London**, 1 Aug 1920; engraving apprentice; joined **RNZAF** Dec 1939.

¹⁰ Flying Officer H. E. A. Price, DFM; **Invercargill**; born Athol, Southland, 7 Sep 1915; farmer; joined **RNZAF** Dec 1940.

The first attack led by the **Pathfinder Force** was launched on the night of 18 August 1942 against Flensburg, where there were large submarine building yards. Raids on such naval targets were now being made with increasing frequency and, together with aerial minelaying operations, formed the major part of Bomber Command's contribution to the war at sea. Subsequent targets to which large forces were led by the pathfinders included **Frankfurt**, attacked by 226 bombers on 24 August, and **Kassel**, raided two nights later by 340 aircraft. On the latter occasion the **Pathfinder Force** consisted of eight Stirlings, eleven Lancasters and fourteen Wellingtons, which paved the way for a very successful attack. German police records reveal that fires were started throughout the town, and the Henschel aircraft factory, a large railway construction firm and the important Fieseler Works, manufacturing aero-engines, were all heavily damaged. A few nights later considerable destruction was inflicted upon **Nuremberg** and Saarbrucken. In September came heavy attacks on **Karlsruhe**, **Bremen**, **Duisberg**, **Dusseldorf** and **Essen**, together with smaller raids on the submarine building yards at **Lubeck** and Flensburg and against **Munich** and Saarbrucken. Several of these raids caused notable destruction. At Karlsruhe some sixty acres at the east end of the harbour were laid waste, while the raid against **Dusseldorf** on 10 September devastated over one hundred acres in the town, including numerous warehouses and industrial premises. October raids on Osnabruck and **Kiel** also caused

fairly widespread damage. On the other hand, there were occasions when heavy cloud or thick haze prevented the majority of crews from seeing the pathfinder markers and scattered bombing resulted. This occurred during attacks on **Bremen** and **Essen** in September while, at the beginning of the same month, the main weight of a heavy attack intended for Saarbrücken fell upon the neighbouring town of Saarlautern. Again in the middle of October, an attack on **Cologne** by a force of 289 bombers was largely frustrated by high winds and rough weather which caused the marking to go astray. Most of the bombs fell to the south-west of the city.

Nevertheless, in spite of such failures, there was a marked improvement in night bombing operations following the introduction of the **Pathfinder Force**, and photographs taken during the attacks and in subsequent daylight reconnaissance showed a considerable increase in the concentration of the bombing round the aiming point. Unfortunately, however, a new source of error was also revealed. On several occasions when there had been difficulty in placing the markers correctly, the whole concentration had been misplaced. Any errors in marking were, in fact, perpetuated by the whole force, since the crews of the main bomber stream were now ordered to aim at the markers dropped by the pathfinders instead of trying to find the aiming point themselves.

That the pathfinder crews sometimes found it hard to locate the aiming point was not surprising since, apart from enemy gunfire and searchlights, there were many technical difficulties still to be overcome. The existing flares produced an upward glare which not only dazzled the air bomber and made identification of ground detail harder, but also provided a background against which the aircraft were clearly silhouetted to the German night fighters above them. Another problem was the variation in the delay fuses of the flares. This was solved by the fitting of a barometric fuse, but it was some considerable time before hooded flares became available in any quantity. Accurate marking of the aiming point presented a further difficulty. As adequate marker bombs

were still under development, ground marking was done with 30-pound and 250-pound incendiaries dropped in salvos. These proved unsatisfactory since they were not easy to distinguish, particularly in the later stages of a raid. By then they had either burnt out or been put out or else had become submerged in the fires and smoke. Various experiments were tried, including the use of coloured flares and a few 4000-pound incendiaries, known as 'pink pansies', to mark the release point or the extremities of the target. The latter, while very distinctive when bursting, failed to leave any permanent mark and were also soon copied by the Germans in open country. The flares had the disadvantage of being subject to wind drift.

Flying in the van of the main force, the pathfinder crews also bore the brunt of the enemy counter-attack. Often as they approached the target, their machines were caught in searchlight concentrations and then subjected to intense anti-aircraft fire or attack by enemy fighters. Many were shot down. Before the end of 1942 twenty-one, or nearly half the New Zealanders flying with the pathfinder squadrons, had been posted missing, only two of them surviving as prisoners of war. There were many eventful flights. On one raid to Turin the weather was so bad that only two pathfinder aircraft out of the eight detailed from one base reached their objective. In the vicinity of the Alps the cloud bank was over 20,000 feet, and the two Stirlings flew through it on dead reckoning to come out almost directly over Turin. Only the machine piloted by Flight Lieutenant Barron completed its mission, the other being shot down over the target. During a subsequent attack on **Munich** Barron's **Stirling** was twice attacked by night fighters. The rear gunner succeeded in driving off and possibly destroying one of them but the other, a Junkers 88, made repeated attacks, raking the bomber with machine-gun fire. Parts of the wings and tail plane were torn away and the fuel supply so damaged that both port motors threatened to stop through lack of petrol. Eventually the flight engineer improvised repairs that enabled the **Stirling** to limp home. Shortly afterwards, in a raid on **Hamburg**, Barron had one of the engines shot from his aircraft whilst over the target. Then, during the return flight, the plane ran into a

storm and ice began to form on the wings and fuselage. With only three engines it was impossible to get above the cloud, and the **Stirling** was gradually forced lower and lower until, over **Rotterdam**, it was flying at barely 2000 feet. The crew furiously jettisoned guns, ammunition, and everything removable in the aircraft. Finally, just as they were preparing to bale out, the ice began to melt and Barron was able to gain sufficient height to cross the Channel safely. Barron had begun flying with Bomber Command in 1941, completing his first tour of operations with No. 15 Squadron. On the formation of the Pathfinder Force, he volunteered and was accepted to fly with No. 7 Stirling Squadron. He soon proved himself 'an outstanding pilot, showing courage and skill of a high order'. In May 1944, by which time he had completed 77 raids and risen from Flight Sergeant to Wing Commander in 23 months, he was awarded a bar to the DSO. He lost his life in the same month during a raid on the railway marshalling yards at Le Mans.

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During the last months of 1942 many of the targets attacked by Bomber Command were in northern **Italy**. The main purpose of this renewed assault on **Italy** was to contain the enemy air force in that country and divert attention from the Allied landings in North **Africa**. There was also the possibility that the heavy bombardment, together with the Allied successes in North Africa, would have serious effects on the morale of the Italian people. **Italy** might then be driven out of the war or at least rendered more of a liability than an asset to the Germans. Beginning with a raid against Genoa by 112 bombers on the night of 22 October, twelve major attacks were launched during the next two months, the main weight falling upon the port of Genoa and the industrial cities of Milan and Turin. Most of these attacks achieved considerable success. In Genoa the port area and industrial buildings suffered severely, while in Milan there was a very definite wave of panic after the first raid, many of its inhabitants fleeing from the city. The centre of Turin was also heavily hit, railway facilities and industrial buildings, including the Fiat Works, suffering severe damage. ¹

¹ On 21 November 1942 Count Ciano, Italian minister and Mussolini's son-in-law, wrote in his diary: 'Our cities are suffering heavy punishment from the R.A.F. ... This raises serious problems, evacuation from cities, supplies and the reduction of the industrial potential.... the spirit of resistance is less than one might expect'.

This concentrated bombing was made possible by the excellent visibility over Italian cities; with their relatively lighter defences, crews were able to go down low and more readily locate the aiming points. During one raid on Genoa Flight Sergeant Gatland ¹ startled his crew by 'flying between the cathedral tower and the top of a high building'. His machine was hit by fire from the ground but he managed to get it clear of the area and return safely. Losses during these raids on **Italy** were comparatively light, although there were occasional interceptions by night fighters. When nearing the French coast after the raid against Turin on 28 November, the **Halifax** captained by Flight Lieutenant Harrison ² was repeatedly attacked by a Messerschmitt and badly shot up before the enemy machine was finally driven down by the tail gunner. Like many pilots, Harrison had already experienced other eventful sorties. In the previous March, returning in bad weather from a mission over **Germany**, his machine crashed in the **Yorkshire** moors and his navigator was killed. Although suffering from head injuries, a broken arm and a crushed foot, Harrison had dragged his unconscious wireless operator from the burning aircraft before collapsing himself. After five months in hospital he returned to flying and subsequently became a flight commander in his squadron.

However, if enemy opposition was less in the raids on **Italy**, the flights themselves were a severe test of endurance and airmanship owing to the distance of the targets and the barrier of the Alps. On 29 November only half the force despatched to Turin succeeded in reaching that city. One pilot who flew on this raid said afterwards: 'As we neared the Alps rain and low cloud reduced visibility to a few yards. It became bitterly cold as we climbed higher, then both electrical storms and ice

formations gave cause for anxiety. The ice flew in large chunks against the fuselage'. Some crews struggled valiantly most of the way only to be forced to turn back through shortage of fuel. It was on this night that an Australian pilot, Flight Sergeant Middleton,³ displayed great gallantry. After experiencing difficulty in crossing the Alps, his **Stirling** was hit over the target and both he and his second pilot severely wounded. Nevertheless they completed the return crossing in the damaged machine, only to run short of fuel on reaching the English coast. Middleton, who was badly wounded in the face and could see very little, then ordered his crew to abandon the aircraft while he flew along the coast. He then intended heading seawards. Five of the

¹ Flight Lieutenant F. E. Gatland, DFM; **Auckland**; born **Onehunga**, 14 Apr 1917; farmhand; joined **RNZAF** Mar 1941; p.w. 28 Nov 1942.

² Squadron Leader J. A. Harrison, DSO, DFC; **Takapau**; born **Hastings**, 28 Sep 1914; farmer; joined **RNZAF** Nov 1940.

³ Pilot Officer R. H. Middleton, VC; born **Waverley, Australia**, 27 Jul 1916; joined **RAAF** Oct 1940; killed on air operations, 30 Nov 1942.

crew left safely while two remained to help their captain, but the **Stirling** subsequently crashed into the sea. Middleton was awarded the **Victoria Cross** posthumously.

While Italy bore the brunt of the **Royal Air Force** bombing offensive in November and December 1942, several heavy attacks also fell on targets in **Germany**. **Hamburg, Mannheim, Munich, Stuttgart**, and **Duisberg** were each raided by forces of upwards of 200 bombers. In the raid on **Stuttgart** Flying Officer Brookbanks¹ flew his **Halifax** to the target with branches of a tree embedded in the engine radiators. 'Just after crossing the French coast we had come down low to avoid searchlights, had no time to climb clear of some trees and just brushed

over the tops with the branches scraping horribly against the aircraft. The propellers were not seriously damaged so we went on.' The Halifax was damaged in an encounter with night fighters during the return flight and reached base with the branches still in the radiators. Another Halifax captain, Flying Officer Silcock, ² detailed to attack the Dornier factory at Wismar, flew through the tops of the flames rising from burning buildings, and the inside of his machine was filled with smoke and pieces of burnt ash. In spite of balloons and anti-aircraft fire at point-blank range, he had gone down to make certain of hitting his target.

The most successful of the autumn attacks on **Germany** was the raid against **Duisberg** towards the end of December, when crews found unusually good visibility and were able to deliver a concentrated attack. German police records reveal that many industrial buildings were damaged, the railway hit in many places, and over twenty acres of the town almost completely devastated by fire. In the clear weather, however, the German defences were very active and many crews reported combats with night fighters. The **Stirling** captained by Squadron Leader Allcock ³ encountered a Junkers 88 when approaching **Duisberg** in the later stages of the raid. The bomber, silhouetted against flares and searchlights, was a clear target, but the rear gunner got in a first burst and pieces were seen to fall away from the enemy machine. However, the Junkers replied with cannon and machine-gun fire, scoring repeated hits. The starboard tail plane and fin of the **Stirling** were damaged, a burst behind the inner port engine set the dinghy storage alight, a starboard fuel tank was holed and petrol flowed into the fuselage.

¹ Flight Lieutenant R. H. Brookbanks, DFC; **Auckland**; born **Auckland**, 28 Aug 1919; secretary and accountant; joined **RNZAF** Jul 1941.

² Squadron Leader C. K. Silcock, DFC and bar; **Auckland**; born Brightwater, **Nelson**, 4 May 1915; engraver; joined **RNZAF** Mar 1941.

³ Wing Commander G. M. Allcock, DFC and bar; born **Wellington**, 14 Dec 1916; joined **RAF** Aug 1939; CGI, No. 1651 Conversion Unit, 1942–43; No. 7 Sqdn, 1945.

Both the second pilot and wireless operator were wounded, the rear gunner was blinded by a shell which hit the rear turret and exploded on impact, while the flight engineer was folded up in his seat suffering intense pain. His face had been badly scorched by a shell which burst inside the aircraft. Eventually the mid-upper gunner was able to get in an accurate burst and the Junkers fell away, going down in what appeared to be a vertical dive. Wounds were attended to while Allcock continued his run to the target and dropped the bombs. His second pilot, Sergeant Murray, ¹ a 20-year-old Londoner, displayed remarkable fortitude. Although his left ankle was shattered, he hobbled to the rear turret and got the injured gunner out. Then he attended to the wireless operator, stopping his bleeding and treating his wounds. It was only when the navigator noticed pools of blood on the floor that the crew discovered that Murray was wounded himself and had collapsed from loss of blood. Meanwhile the fire in the port wing continued to burn so Allcock ordered the crew to be ready to bale out. Fortunately the fire did not spread, and he was able to fly his charred and battered **Stirling** back across the North Sea only to discover, as he made a landing circuit, that the undercarriage was jammed. He then succeeded in making a belly landing clear of the runway. Allcock was at this time serving as flight commander with No. 214 Squadron in Bomber Command. He had previously completed bombing missions in the **Middle East** and had also flown with a transport squadron, carrying troops and stores to the front line and evacuating wounded.

There were many examples of similar fortitude in difficult circumstances. In the attack on **Hamburg** on 9 November, the Lancaster flown by Flying Officer Calvert ² was hit by flak over the target and sustained severe damage. One shell burst near the port wing, spraying the fuselage with shrapnel and blowing out most of the perspex. A

second burst hit the aircraft squarely, killing the wireless operator and wounding both captain and navigator. Much of the equipment was damaged and the aircraft became very difficult to control. Nevertheless, although wounded in one arm, Calvert succeeded in getting his battered machine clear and then managed to fly it back to England where, in very bad visibility, he made a successful crash landing without further injury to his crew. On the night of 21 December when 137 bombers flew to **Munich**, the pathfinder Lancaster in which Flight Sergeant Wallace was wireless operator had a particularly hazardous flight. During the

¹ Flight Sergeant J. C. D. Murray; born Charlton, **London**, 3 May 1922; joined **RAF** Jan 1941.

² Squadron Leader R. O. Calvert, DFC and two bars; **Cambridge**; born **Cambridge**, 31 Oct 1913; wool classer; joined **RNZAF** Dec 1940.

outward journey the bomber was intercepted by a German fighter and subjected to persistent attacks. The first came from almost directly below, seriously wounding the bomb aimer and setting fire to flares and a camera flash. Wallace was wounded in the leg. His pilot immediately began to take evasive action but the enemy fighter continued to attack.

Apart from the flares, a fierce fire was soon burning in the waist of the aircraft (runs the official report). Wallace and the flight engineer immediately attempted to subdue the flames. Directly below them lay the bomb bay full of incendiaries, flares and high explosive bombs. Several times the intense heat and fumes forced them back. Then the flight engineer collapsed but Wallace, despite his wounds, returned to attack the flames and eventually, after jettisoning all removable burning material, got the fire out.

Meanwhile the aircraft had been riddled with bullets before the German fighter finally broke away. The mid-upper gunner was wounded and burnt about the face and hands. He was given first aid along with the

bomb aimer, and the Lancaster turned for home.

Weather conditions over England were most adverse, with low cloud and rain and Flight Sergeant Wallace contributed considerably to the safe return of the crew (the report continues). When the fire had been extinguished he returned to his wireless set and despite wounds and burns, worked continuously in sending messages and obtaining fixes of the aircraft's position. His conduct throughout the emergency was extremely gallant.

This incident occurred on Wallace's sixteenth operational flight with his pathfinder squadron.

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During the second half of 1942 Wellingtons from the New Zealand Squadron flew in almost all the major raids made by Bomber Command, a total of 525 sorties being despatched on 68 missions, when 560 tons of bombs were dropped on **Germany and **Italy** and a total of 160 mines laid in enemy waters. The unit was to suffer severe casualties during this period, 34 Wellingtons being lost. Towards the end of July Wing Commander Olson, who had proved both a popular and efficient leader, relinquished command of No. 75 Squadron to take charge of the bomber station at Oaking- ton. Olson was later awarded the DSO in recognition of his fine work with the New Zealand unit and in raising the operational standard of his bomber base to a very high level. Wing Commander Mitchell, ¹ a Scot with a distinguished record in Bomber Command, was welcomed as Olson's successor. He quickly established himself with the New Zealanders, and under his leadership the unit was to maintain its high reputation for operational efficiency.**

¹ Wing Commander V. Mitchell, DFC; born Rothes, **Scotland, 23 May 1915; joined **RAF** 1936; commanded No. 75 (NZ) Sqdn, 1942; killed on air operations, 17 Dec 1942.**

German ports and cities were the main targets for the Wellingtons in

July, when **Duisberg** was bombed on four occasions and Hamburg twice. Both cities were well defended, and from the second raid on **Hamburg** six of the 17 Wellingtons despatched failed to return. Their captains were Flight Lieutenant Wilson ¹ and Flight Sergeants Croall, ² Gilbertson, ³ Hutt, ⁴ Johns ⁵ and Sutherland. ⁶ Members of Croall's crew were fortunate to survive when the controls failed just as the bomber was crossing the German coast on the return flight. After being badly shot up by anti-aircraft fire over **Hamburg**, the Wellington was flying low when, in the words of the captain:

The control column came back loosely into my body and a few seconds later we hit the sea. Water came rushing in ... everything went dark I felt the seat crushing me against the instrument panel. Struggled free and on reaching the surface found all the others except the rear gunner. The wing dinghy was inflated so we scrambled in. Most of us were bruised and cut, some more than others but by paddling, drifting and swimming alongside we at last reached the shore at daylight and were captured shortly afterwards.

For Bomber Command's heavy attack against **Dusseldorf** on 31 July, No. 75 Squadron sent eleven Wellingtons. Crews reported a successful raid, large fires being seen near the aiming point. Searchlights and anti-aircraft fire were particularly active, but few night fighters were sighted during the flight over **Germany** and all the squadron's bombers returned safely. During the next few weeks there followed attacks on **Essen**, **Frankfurt**, Mainz, Osnabruck and **Duisberg**. Mines were also laid in the entrance to the U-boat base at St. Nazaire and in the shipping lanes off the Frisian Islands. In these operations four Wellingtons were lost, three of them captained by New Zealanders—Flying Officer Dobbin, ⁷ Pilot Officer Bradey, ⁸ and Flight Sergeant Barclay. ⁹

¹ Flight Lieutenant P. J. Wilson; born **London**, 12 Sep 1919; motor mechanic; joined **RNZAF** Jul 1940; killed on air operations, 29 Jul 1942.

² Warrant Officer C. Croall, MBE; **Hamilton**; born **Hawera**, 23 Jan 1916; carpenter; joined **RNZAF** Jan 1941; p.w. 29 Jul 1942.

³ Flight Sergeant J. E. Gilbertson; born Waipawa, 9 Jul 1920; clerk; joined **RNZAF** Feb 1941; killed on air operations, 29 Jul 1942.

⁴ Flight Sergeant G. A. Hutt; born **Palmerston North**, 17 Oct 1916; clerk; joined **RNZAF** Feb 1941; killed on air operations, 29 Jul 1942.

⁵ Flight Sergeant A. G. Johns; born **Sydney**, 2 Mar 1922; clerk; joined **RNZAF** Feb 1941; killed on air operations, 29 Jul 1942.

⁶ Flight Sergeant A. G. Sutherland; born Sutherlands, 28 May 1919; farmer; joined **RNZAF** Dec 1940; killed on air operations, 29 Jul 1942.

⁷ Flight Lieutenant L. St. G. Dobbin; born Opunake, 9 Nov 1912; school teacher; joined **RNZAF** Jun 1940; killed on air operations, 12 Aug 1942.

⁸ Pilot Officer G. E. F. Bradey; born Feilding, 23 Sep 1916; farmer; joined **RNZAF** Jun 1940; killed on air operations, 12 Aug 1942.

⁹ Flight Sergeant T. S. Barclay; born Pelaw, Northumberland, 29 Oct 1919; clerk; joined **RNZAF** Mar 1941; killed on air operations, 12 Aug 1942.

Towards the end of August the squadron left Feltwell, where it had been based since its formation, for RAF Station, Mildenhall, a large bomber station near Bury St. Edmunds, in Suffolk. The move was not allowed to interfere with operations, and in the last week of the month twelve and ten Wellingtons were despatched to take part in the

pathfinder raids against **Kassel** and **Nuremberg**. On both occasions many fires were seen and the success of the attacks was confirmed by subsequent daylight reconnaissance. But the enemy defences were active and several crews from the New Zealand Squadron were among those who reported encounters with night fighters. In the raid on **Kassel** one Wellington was fiercely attacked when approaching the city. Although the rear gunner eventually drove off the fighter, the bomber was badly shot up and crash-landed on reaching England. The following night two Wellingtons were lost, while a third, with its petrol tanks holed and controls damaged, was just able to reach an airfield in southern England.

Objectives for the squadron's bombers in September included the ports of **Bremen** and **Emden** and the industrial centres of **Dusseldorf**, **Essen** and **Frankfurt**. In addition, minelaying sorties were flown on six nights to areas off the Dutch coast, the entrances to St. Nazaire, and the U-boat training grounds in the Baltic. While substantial damage was inflicted in several of these raids, the outstanding success was the attack against **Dusseldorf** on the night of the 10th when a force of 476 aircraft was despatched by Bomber Command. Although there was some ground haze in the target area, the pathfinders succeeded in marking the aiming point accurately and a concentrated attack developed. Wellingtons from No. 75 Squadron flew in the last stage of the raid and on arrival found large fires burning in the city. Searchlights and anti-aircraft batteries were active, but the crews were able to drop their incendiaries and high explosives in the centre of the conflagration. Later reconnaissance revealed heavy damage in the centre of the city, more than one hundred acres between the Rhine and the main railway station being devastated.

There were further encounters with night fighters during September in which several Wellingtons were shot down and others badly mauled. On return from the raid against **Essen** on the 16th, Pilot Officer J. L. Wright and his crew were able to report a successful engagement. They had just reached the North Sea on the homeward flight when a Junkers

88 was sighted below and slightly ahead. Wright immediately manoeuvred so that his front gunner, Flight Sergeant Reynolds,¹ could open fire. His first burst

¹ Flight Lieutenant R. C. Reynolds, DFC; **Lower Hutt**; born **Wellington**, 4 Dec 1919; truck driver; joined **RNZAF** Sep 1940.

set the enemy's port engine alight, then further accurate fire caused the Junkers to explode in mid-air. The same night the Wellington captained by Pilot Officer Blincoe¹ had an eventful flight typical of many experienced by crews at this time. When approaching **Essen**, the bomber ran into thick anti-aircraft fire. One shell hit the starboard mainplane between the fuselage and the engine and set fire to the fabric. After diving to escape from the searchlights and flak which now concentrated on his machine, Blincoe found that the rush of air had extinguished the flames. He then flew on towards his target and dropped the bombs. The long return flight was then begun but, before the Dutch coast was reached, a night fighter suddenly attacked. The crew were unaware of its approach and the first burst nearly cut the rear turret away. In a second attack the wireless operator was wounded and a fire started inside the bomber. The navigator beat out the flames and Blincoe was fortunately able to find cloud cover for his crippled machine. Base was reached without further incident and the Wellington crash-landed. Altogether eight Wellingtons were lost in the September attacks on **Germany**, four of them captained by New Zealanders—Flight Sergeant Parkes² and Sergeants Johnson,³ Metcalf,⁴ and Sharman.⁵

The long association of the New Zealand Squadron with Wellington aircraft, which had lasted since formation, came to an end in October. On the 15th B Flight moved to the Conversion Unit at Oakington for instruction and training on the four-engined Stirlings which were to replace the Wellingtons. Operations were meanwhile continued by A Flight, whose crews followed a fortnight later. Most of the aircrew had developed a strong affection for their 'old Wimpeys' and they regretted

the change.

‘Few aircraft,’ wrote one of them, ‘bore without serious complaint such continual increases in power, in all-up weight and armament as the Wellington during its various vicissitudes. As power and weight were piled on, the geodetics just stretched and took it happily. No other machine could feel quite like a Wellington in the air because always between the pilot and the result of his efforts there was a strange “something” which could only be described as flexibility. Everything waved quietly about and all the time one could feel a cross-section of the atmosphere. In bumpy weather the control column would move gently backwards and forwards while rear turret operation would produce strange movements of the rudder, the motors rocked slowly up and down and the wing tips waved in miraculous rhythm.

¹ Pilot Officer K. H. Blincoe; born **Nelson**, 3 Nov 1909; P and T Dept faultman; joined **RNZAF** Apr 1941; killed on air operations, 3 Feb 1943.

² Flight Sergeant W. R. Parkes; born Ohingaiti, 25 Sep 1910; engine driver; joined **RNZAF** Oct 1940; killed on air operations, 7 Sep 1942.

³ Warrant Officer E. W. P. Johnson; **Invercargill**; born Dunedin, 8 Feb 1916; furnisher; joined **RNZAF** Jun 1941; p.w. 9 Sep 1942.

⁴ Sergeant T. O. Metcalf; born Norsewood, 18 Jul 1923; farmhand; joined **RNZAF** Jul 1941; killed on air operations, 11 Sep 1942.

⁵ Sergeant G. W. Sharman; born **Huntly**, 23 Feb 1915; plumber; joined **RNZAF** May 1941; killed on air operations, 7 Sep 1942.

All the types of Wellingtons seemed to be nearly vice-free and they could be brought in to land at a ridiculously low speed. There were many occasions on which this was a decided advantage.'

During the first fortnight of October the Wellingtons had flown in raids on **Krefeld**, **Aachen**, Osnabruck and **Kiel**, a total of 56 sorties. In the attacks on **Krefeld** and **Aachen** there was considerable haze in the target area and the bombing was scattered. Cloud and haze prevented some aircraft from reaching Osnabruck but all the New Zealand crews were able to bomb and start fires. The attack on **Kiel** was made in clear weather; crews found the aiming point with less difficulty than usual and reported particularly large fires in the dock area. Targets attacked by Wellingtons from A Flight during the latter part of the month included **Cologne**, **Essen**, Genoa and Milan. The flights to **Italy** were made under difficult weather conditions. On 24 October, when Wing Commander Mitchell led five Wellingtons to Milan, two of them, captained by Sergeants Hugill ¹ and McConnell, ² failed to return. The squadron's last sorties with Wellingtons were flown the following night when mines were laid off **Brest** and near the Frisian Islands.

The change to Stirlings was accompanied by a further move to RAF Station, Newmarket, the site of the famous racecourse in Cambridgeshire. Thus to suspicion of the new after the old and tried weapon was added the difficulty of operating from a new airfield in unfamiliar surroundings.

'The early days at Newmarket were rather trying,' writes one of the senior officers. 'In addition to the normal feelings of uncertainty before crews became accustomed to the new type of aircraft, there was the strange airfield. The bank a short distance from the end of the main runway did not help matters. It was a prehistoric fortification known as the Devil's Dyke and is reputed to have been constructed by Queen Boadicea. Taking off in daylight over the Devil's Dyke caused no feelings of apprehension, but at night, when it could not be seen, was another story. However, on the occasions when he operated, the squadron

commander made a point of taking off first over the Dyke, and although one machine crashed on the bank and others had narrow escapes, the bogey was eventually laid.'

Meanwhile, however, the difficulties of operating with the new aircraft in the northern winter and further casualties, which included the loss of their commanding officer, were to make this a rather unhappy period for No. 75 Squadron.

The first operational sorties with the Stirlings were flown on the night of 20 November, when four crews from B Flight took part in a raid on Turin, the New Zealand captains being Flying Officer



BATTLE OF THE ATLANTIC

¹ Sergeant H. J. Hugill; born **Auckland**, 26 Jan 1921; fruit grower; joined **RNZAF** Jul 1941; killed on air operations, 25 Oct 1942.

² Sergeant J. A. McConnell; born Dunedin, 16 Nov 1920; grocer; joined **RNZAF** Aug 1941; killed on air operations, 25 Oct 1942.

Trott, ¹ Flight Sergeant Bailey ² and Sergeant Franklin. ³ The following night two Stirlings were among the force which attacked

Stuttgart, and a further six sorties were flown to **Italy** before the end of the month. Meanwhile A Flight had been held back at Oakington by bad weather which prolonged their conversion period. A further misfortune was the loss of Sergeant Broady ⁴ and his crew, who were killed when their aircraft crashed during a training flight. However, the second week of December found the squadron once again at full strength but, much to the disgust of the air- crews, unfavourable weather and difficulties with the new machines severely hampered operations for the remainder of the year. The frequent mechanical failures were a source of constant disappointment and frustration to the ground crews, who did their utmost to maintain a high standard of serviceability. Nevertheless, defects frequently developed as the bombers were about to take off or shortly after they had become airborne and missions had to be abandoned. During the raids on **Italy** several crews were forced by engine failure to turn back during the climb over the Alps. Of the 37 sorties detailed during December only 17 were completed successfully. The squadron was particularly unfortunate on the 17th when, of the five Stirlings which took off to attack the Opel Works at Fallersleban, four failed to return. Wing Commander Mitchell was among the missing crews, which included ten New Zealanders, one of whom, Flying Officer Jacobson, ⁵ was a captain. Pilot Officer McCullough, ⁶ who flew the only **Stirling** to return, reported that his machine had been attacked twice by enemy fighters in the vicinity of the target. In this bleak period the one bright spot was the raid against Turin on the night of 9 December, when all five Stirlings reached the target and returned without incident, crews reporting many fires and huge columns of smoke after the bombing. But a few nights later when four Stirlings were about to take off to lay mines off Bordeaux, a strong cross wind caused the first three bombers to swing violently before they became airborne. The fourth struck the top of the Devil's Dyke, straightened up for a moment, and then crashed a mile from the airfield. The mines exploded and the entire crew were killed.

¹ Flight Lieutenant L. G. Trott, DFC; **Auckland**; born

Otorohanga, 20 Nov 1920; student; joined RNZAF May 1941.

² Squadron Leader J. M. Bailey, DFC and bar; England; born County Tyrone, Northern Ireland, 19 Aug 1914; motor engineer; joined RNZAF Apr 1941.

³ Sergeant B. A. Franklin; born Auckland, 27 Apr 1921; law clerk; joined RNZAF Jul 1941; killed on air operations, 16 Dec 1942.

⁴ Sergeant R. H. Broady; born Auckland, 6 Feb 1914; hardware salesman; joined RNZAF Oct 1939; killed in flying accident, 28 Nov 1942.

⁵ Flying Officer G. H. Jacobson; born Akaroa, 13 Sep 1915; journalist; joined RNZAF Jan 1941; killed on air operations, 17 Dec 1942.

⁶ Pilot Officer J. McCullough, DFC; born Timaru, 5 Aug 1912; clerk; joined RNZAF Jan 1940; killed on air operations, 3 Feb 1943.

The New Zealand Squadron was not alone in its misfortunes during this period. Other units were experiencing similar difficulties and suffering casualties in their early operations with the new heavy bombers. Nevertheless, in spite of the various setbacks and disappointments, the year had seen marked developments in the operations of Royal Air Force Bomber Command. Although no great numerical expansion had taken place, the force had changed from one primarily equipped with medium bombers to one essentially heavy in character. The Lancaster was now replacing the Wellington as the mainstay of the offensive. In tactics and technical equipment it had been, in many ways, a period of experiment, the results of which were to be seen in later operations. Air Marshal Harris himself regarded it as ‘a year of preparation in which very little material damage had been done

to the enemy which he could not repair from his resources, but in which we had obtained or had in near prospect what was required to strike him to the ground, and learned how to use it.'

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 14 – BATTLE OF THE ATLANTIC, 1942

CHAPTER 14

Battle of the Atlantic, 1942

FOR the Allies 1942 was the most difficult and critical period of the war at sea. They had to maintain the flow of supplies from Great Britain to **Russia, Malta, Egypt and India**, while the flood of 'lease-lend' material which was beginning to pour from the United States to Great Britain, **Russia**, and the **Middle East** demanded more and more shipping. The protection of this increasing volume of seaborne supplies made heavy demands on the air and surface forces since the enemy now redoubled his efforts to intercept Allied convoys. At the beginning of 1942 the Germans had a total fleet of some 250 U-boats and more were coming into service at the rate of about ten a month. Moreover, the Germans had now largely surmounted their problem of dilution of personnel. Many U-boats had been at sea during the past year and there were numbers of trained and tried men with seagoing experience who could be used to leaven the mass of newer entries into the submarine service.

Intensification of the air effort against the enemy at sea was made particularly urgent by the heavy losses which the **Royal Navy** had suffered at the close of the previous year. In November the carrier *Ark Royal* and the battleship *Barham* had been lost in the **Mediterranean** and the aircraft carrier *Illustrious* damaged; the following month the battleships *Valiant* and *Queen Elizabeth* were mined at **Alexandria** and the *Prince of Wales* and the *Repulse* were lost in the **Far East**. **Royal Air Force Coastal Command** was ill equipped to undertake additional tasks at this time owing to the demands of overseas theatres for reinforcement, while the new type of aircraft and equipment which the situation demanded were not yet available. It was, in fact, with very limited resources in men and machines that the command faced the onslaught of the U-boats in what was to prove the blackest year of the war at sea.

New Zealand airmen were to make a significant contribution during this difficult period. As a result of the increasing output of the Empire Air Training Scheme, more men from the Dominion were now reaching

the squadrons engaged in hunting the U-boats. While some found their way to **Iceland**, Gibraltar and **West Africa**, the majority flew with units based in the **United Kingdom**, many at bleak and remote spots in Scotland, Northern Ireland, the Hebrides, and in the Shetlands far to the north. During 1942 several New Zealanders who had joined the **Royal Air Force** before the war held senior posts in **Coastal Command**. Air Vice-Marshal Maynard, who had successfully organised the air defence of **Malta** during the initial stages of the enemy attack, was at Headquarters **Coastal Command**. At the same headquarters Wing Commander Young,¹ who had joined the **Royal Air Force** in 1934 on gaining a special University commission, continued as engineering staff officer, and Wing Commander R. Faville, also an engineering specialist, was in charge of an experimental unit. One of the squadrons flying patrols over the Western Approaches was commanded by Wing Commander D. McC. Gordon, while Squadron Leader I. C. Patterson was flight commander in another. Two pilots who had flown with **Coastal Command** in the early months of the war, Squadron Leaders C. E. W. Evison and Marshall,² both became flight commanders with Sunderland squadrons, Evison flying from Bathurst in **West Africa** and Marshall from a base in south-west Wales. Among the experienced pilots now serving as instructors were Wing Commander G. G. Stead, who had flown from **Iceland** and **West Africa** as well as the **United Kingdom**, and Squadron Leaders Godby³ and D. M. Brass, both of whom had flown Ansons in the early months of the war. Wing Commander H. L. Willcox, a senior medical officer with **Coastal Command**, was among the small group of New Zealanders who served in various ground duties during 1942. One New Zealand corporal spent 22 months in the Orkney Islands as a wireless operator.

Close escort of the **Atlantic** convoys continued to be the main task; however, as the year progressed, there was a steady increase in the number of patrols designed to harass the U-boats on passage to their stations in the **Atlantic**, particularly while crossing the Bay of Biscay from French ports. At the same time the need for air cover in other areas increased and aircraft flew from northern bases to protect convoys going to **Russia**. Ships were also escorted and anti-submarine patrols

flown from bases in the **Freetown** area of West Africa and from Gibraltar. 'Coastal' Command was, in fact, becoming an 'Ocean' Command.

¹ Group Captain T. G. Young; born **Wellington**, 17 Jun 1911; permanent commission **RAF** 1934; transferred technical branch 1940; **Coastal Command**, 1939–43; engineering duties in NZ, 1943–45; CTO, No. 2 School of Technical Training, 1945.

² Wing Commander T. O. Marshall, DFC; born Stratford, 25 Nov 1914; joined **RAF** 1937; Flying Instructor, No. 4 OTU, 1942; Staff duties, D of AT, **Air Ministry**, 1943; killed on air operations, 8 Jul 1944.

³ Wing Commander P. R. Godby; born **Christchurch**, 27 Aug 1914; joined **RAF** Mar 1939; transferred **RNZAF** Jan 1945; Navigation Instructor, No. 9 OTU, 1942–43; Staff duties, Navigation, HQ No. 19 Group, 1944.

For the most part, the long air patrols were monotonous and exacting, demanding quiet courage, endless patience, and constant vigilance in preparation for swift and sudden attack. The pilots, particularly those in the flying boats, had to possess many of the qualities of the sailor, and in the early days of their operational training they were brought into close association with the Royal Navy. Tactical exercises were carried out with surface vessels and submarines, visits were made to naval bases and, when it could be arranged, aircrew met and discussed their work with the crews of the naval escort vessels. Furthermore, as part of their training, pilots had to acquire a knowledge of the various types of naval and merchant vessels they were likely to encounter. This training in ship recognition formed an important part of the instruction of all aircrew in the command. The pilot appointed captain of an aircraft became responsible to a large extent for the care and maintenance of his aircraft and for the welfare of his crew. He had to be a leader, able to weld his crew into a team, for without the active co-operation of every member it was impossible to reach a high level of

efficiency in operations. The captain, therefore, had to know something of the work of each man in his crew and train them to work together. On days when they were not engaged on flying duties, he would get his crew together and, in a corner of the mess or huddling round the old iron stove in a Nissen hut, they would discuss tactics and difficulties that had to be overcome. In this way they learnt the value of co-operation, and in most crews men came to know a good deal of each other's jobs so that, in an emergency, they could undertake another's duties as well as their own. In the early days of the war all pilots were trained as navigators, and during 1940 the Hudsons had carried two pilots who took turns at carrying out the duties of navigator. Later, however, as these duties became more specialised, aircrew were trained for either one or the other of these tasks.

There are no landmarks 500 miles out in the **Atlantic** and the crews engaged on patrols over that ocean usually saw no land of any kind for nine-tenths of their flight. They had to find their way by dead-reckoning, aided sometimes by astro-navigation and relying on instruments for their guidance.

The ability to find their way over vast spaces of water, marked only by the changing lanes traced upon its surface by the wind, was a faculty acquired only after months of practice and hard work. The navigator was thus a most important member of the crew. The problems which faced him literally changed with the changing winds. His craft was not moving in an element of which the tides and currents have been known, charted, and set out in tables for hundreds of years. He had no such exact information and was forced to rely upon weather reports and forecasts. But in spite of the splendid assistance provided by the meteorological service, changes in the direction and speed of the wind in the areas through which his aircraft had to fly could not always be calculated accurately in advance. Temperatures and pressures could vary with every change in the cloud formation. Each flight was a navigational adventure. The problems which beset the navigator flying in an aircraft over the **Atlantic** were, indeed, much the same as those

which faced Columbus when sailing upon its surface, although in place of the saliva spat over the bows of the *Santa Maria* by which Columbus was wont to estimate the drift of the vessel, the navigator of a **Coastal Command** aircraft had drift sights and flame floats to aid him. Later, as wireless and radar aids to navigation were more fully developed and astro-navigation more widely used, the task was made somewhat easier. On the other hand, the greater distances then flown made his work very exhausting, since in his special duties he had no relief throughout a flight. In a Catalina, for example, he might be continuously at work, in cramped conditions; for upwards of twenty hours. It was also the navigator's task to keep an accurate log of every flight. As well as recording every alteration of course and every calculation of drift, it included the text of all messages sent and received, all sightings of convoys and individual ships, with details of their number, size and speed, and the position in which they were sighted. In addition a meteorological report was made, usually at the western extremity of the patrol. In all, therefore, the navigators of **Coastal Command** fulfilled a variety of tasks with skill and patient endurance, and the success of their efforts can best be measured by the few aircraft which were lost through errors in navigation and by the regularity with which convoys were duly met and escorted, often in conditions of appalling severity.

The work of the navigator was supplemented by that of the wireless operator-air gunner, and they interchanged their duties to afford some relief on long patrols. As radar sets were fitted to aircraft of the command, these men specialised in operating them, although in the course of a patrol all members of a crew might undertake turns of duty at the radar set. The work of the air gunner in **Coastal Command** was important, even when the aircraft was patrolling in an area where enemy aircraft were not likely to be encountered. His duty was to watch the surface of the sea within his field of vision, and to report anything he sighted. Ships straggling from a convoy, derelict lifeboats and survivors on rafts or in dinghies were often discovered as a result of his vigilance. The wireless operator, on the other hand, saw little of what occurred outside the aircraft. Crouched in a corner over his radio set,

with earphones clasped to his ears, he remained alert, ready to transmit an emergency sighting report or to receive messages which might lead to a change of patrol, a diversion to assist in a search or attack, or instructions to land at a different base owing to weather conditions. There were occasions when alertness on his part led to the reception of a faint SOS from a lifeboat's weak transmitter or from another aircraft in distress. In the larger aircraft another important member of the crew was the engineer, whose duty it was to watch the behaviour of the engines, to check cylinder temperatures, oil pressures and petrol consumption. He also kept a record for each patrol so that any fault which became evident could be dealt with by the maintenance staff of his unit when the aircraft returned to base. Each member of a crew had his allotted task, and every patrol successfully completed was the result of efficient co-operation in carrying out their various duties. While many patrols provided little incident, there was always a report to be made after every sortie. If there had been an encounter with the enemy or if anything unusual had occurred, each member of the crew would be called upon to give details of the events as he had seen them. Usually, however, after a routine patrol the details required were supplied from the navigator's log, with the pilot and the wireless operator checking the account.

The aircraft in which New Zealanders were now flying in the Battle of the **Atlantic** were some of them land aircraft and some flying boats. At the beginning of the war the main land aircraft had been the Anson, but by 1942 it had been almost entirely replaced by faster and larger aircraft. American-built Hudsons had been put into service as fast as they could be procured, and they did valuable work within the limits of their range. Then, during 1942, the Hudsons were gradually supplemented by British Whitleys and Wellingtons and by a few American Liberators and Fortresses. These were bomber aircraft which had been converted for reconnaissance work and they were used for both day and night patrols. The main type of flying boat was the Sunderland, which was an adaptation of the pre-war civil aircraft. Sunderlands had been flying at the outset and were to continue in operations till the end.

Possessing a wide range and an armament formidable enough for them to be named 'the flying porcupines' by the enemy, they had already proved invaluable both in convoy protection and on anti-submarine patrols. In 1942 the Sunderland was the largest aircraft used by **Coastal Command**. Meals could be cooked on board in the galley and there were bunks in the wardroom where the crew could rest when not on watch during a long patrol. Another flying boat which had come into use early in 1941 was the American-built Catalina. While less roomy than the Sunderland, it was notable for its endurance and had, on occasion, flown patrols of over twenty-four hours. Catalina aircraft had played an important part in the events leading to the sinking of the *Bismarck*.

The submarine campaign during 1941, serious though it was, had failed to achieve the success hoped for by the enemy, and by the end of that year the counter measures in the Western Approaches appeared to be gaining the ascendancy. Therefore, the formal entry of the **United States** into the war in December 1941 provided the German U-boat Command with new and welcome theatres of operation. Allowing for the time spent in crossing the **Atlantic**, the 500-ton U-boats could spend at least three weeks off the coast of the **United States** and the 740-tonners about the same period in the Caribbean. Both areas provided a rich harvest. For apart from heavy commitments in the **Pacific**, the **United States** had to protect an extensive network of traffic on other routes so that the anti-U-boat forces, both air and surface, available on the **Atlantic** seaboard were inevitably very limited. Furthermore, the few aircraft that could be employed had neither the special equipment for detecting submarines nor crews with the requisite training and experience.

There was another reason for the concentrated German attack upon ships in American waters. Except for the convoys which had to be fought through to the beleaguered fortress of **Malta** with heavy loss, the **Mediterranean** was virtually closed to shipping; and with **Japan** in possession of the sources of oil in **Borneo** and the Dutch East Indies and with Japanese surface raiders and submarines in the **Indian Ocean**

threatening supplies from the Persian Gulf, the provision of oil to **Britain** from the East by means of long voyages round the Cape of Good Hope was precarious in the extreme, and totally insufficient for her needs. She had to rely on oil from the West—from Aruba, Curaçao, and the Gulfs of Venezuela and Mexico. Thus a stream of tankers passed out of the Caribbean and the Gulf of Mexico and up the east coast of the **United States** before crossing the **Atlantic** in convoy. The Germans realised that if this vital pipeline was cut at or near its sources, the war would be virtually won by the Axis.

When the campaign commenced in January 1942, the enemy had six U-boats in American waters, but on achieving immediate and considerable successes he quickly reinforced them until, by the end of February, there were some twenty boats operating in that area. Avoiding the few escorted convoys, the U-boats concentrated all the venom of their attacks upon such focal areas as Hampton Roads, North Carolina, and Cape Hatteras. Spending the days on the bottom, the U-boats worked mainly at night, using their high surface speed to overtake and choose their targets. When torpedoes ran short, ships were often attacked by gunfire. It was a holocaust. In the last 19 days of January 39 ships, totalling nearly 250,000 tons, were sunk. Sixteen of them were tankers. Then, in February, the larger U-boats entered the Caribbean to attack the oil traffic at its source. They sank a further 23 tankers, and the total sinkings in the Western Atlantic for the month rose to over 300,000 tons. This offensive in the Caribbean slackened during March, but off the American coast heavy sinkings continued and losses through U-boat action reached a new monthly peak figure of more than half a million tons; in all, 94 ships were lost in March, of which a substantial number again were tankers. In April the number of merchant ships lost showed a slight reduction, but unfortunately this was not brought about by the success of any counter measures. It was due to the melancholy expedient of curtailing sailings and to the fact that the enemy could not immediately replace his U-boats on patrol.

The United States commenced running its first coastal convoys in

May but the effect was at first negligible, since the U-boats withdrew to focal areas where convoy was not in force and the dismal tale of shipping losses continued unabated. In the Gulf of Mexico and in the Caribbean the enemy continued to play havoc with the tanker traffic. The U-boat sinkings for that month rose to 600,000 tons, the highest figure for the war up to that time. June, when 145 ships of over 700,000 tons were destroyed, showed no improvement. There were now about 65 U-boats at sea in the **North Atlantic** and they were operating in wider areas off the American coast. Furthermore, the U-boats were remaining at sea for longer periods than was thought possible. However, by July 1942, the convoy system on the American seaboard had been extended so that a ship was under escort throughout the entire voyage from the oil ports in the Gulf of Mexico and the Caribbean to the **United Kingdom**. Counter measures rapidly improved, an increasing number of attacks were made on U-boats, and the diminishing successes obtained in American waters during this month caused the enemy to shift the main scene of his operations to mid- **Atlantic** and to the **Freetown** area.

Throughout this period of disastrous shipping losses along the **Atlantic** coast of the **United States**, **RAF Coastal Command** was only able to provide indirect help by attacking the U-boats as they journeyed to and from their bases in the Biscay ports. The development of this offensive was made possible by the fact that the enemy, while he was enjoying remarkable dividends off the American coast, was content to allow the **North Atlantic** convoys to proceed almost unmolested. Thus **Coastal Command** was able to reduce convoy patrols in that area and move aircraft to the south-west of England for operations over the **Bay of Biscay**.

This air offensive against the U-boats on passage was based on certain limitations of these vessels. In the first place, the average rate of progress of a submerged U-boat was two to three knots, except for short bursts of six to seven knots which, if maintained, would exhaust the U-boat's batteries in less than an hour. Secondly, the standard type of U-boat in use at this time was compelled to come to the surface for several

hours in every twenty-four to recharge its batteries and ventilate the boat. If, therefore, the area through which a U-boat could pass at submerged speed in twenty-four hours was kept under constant observation by aircraft, sightings of surfaced U-boats at some time during that period were, in theory, a certainty. But even in the clearest weather there was a limit to the range at which a U-boat could be detected from an aircraft. An analysis of anti-U-boat operations during 1941 had shown that, in visibility of the order of twelve miles, the average sighting distance of a surfaced U-boat by an aircraft was six miles. In poor visibility the range was, of course, considerably reduced. The patrol areas of individual aircraft had therefore to be close enough to each other to ensure that there was no gap between the visual ranges of adjacent aircraft. Furthermore, to be sure of catching the enemy on the surface, every spot in the patrol area had to come under observation at least once during the minimum period of time required by a U-boat for recharging its batteries.

The early efforts to harass the U-boats crossing the **Bay of Biscay** produced no spectacular results, as insufficient aircraft were available to 'flood' the area with the frequent patrols needed to produce sightings. Moreover, although radar was already proving an invaluable aid, the sharp lookout maintained by U-boats often enabled them to crash-dive before they were seen by the aircraft. However, during the first months of 1942 the daylight patrols did succeed in forcing many U-boats crossing the Bay to surface only at night; but they could still proceed unmolested, for as yet no suitable illuminant was available for use in night attacks. Thus the rather negative achievement in driving the U-boats under in daylight was hardly pleasing to the crews who continued to fly the dreary and seemingly fruitless patrols over the **Bay of Biscay**. At the same time, those who guarded the convoys in the Western Approaches gained little satisfaction from getting them safely through the eastern side of the **Atlantic** only to see them cut to pieces on entering the American zone.

It was, indeed, an unrewarding period in which the monotony of

flying over the sea was seldom relieved by sighting and attack. Among the few pilots more fortunate in this respect were Flying Officer Ensor ¹ and Pilot Officer Neville. ² Ensor, who captained a Hudson from No. 500 Squadron at Stornoway in the bleak Outer Hebrides, was on patrol over the Western Approaches one day in April when the wake of a German submarine was sighted about eight miles away. As the Hudson dived to attack, the U-boat began to submerge and it disappeared a few seconds before the aircraft reached the scene. Ensor therefore aimed his depth-charges ahead of the swirl left by the diving U-boat and they brought air bubbles and oil to the surface. Neville flew as navigator in a Liberator of No. 120 Squadron, the first unit to be equipped with the new American bombers for anti-submarine work. One morning early in May his aircraft was sweeping ahead of a convoy bound from **Canada** to Gibraltar, when a radar contact indicated the presence of the enemy submarine. Although the Liberator used cloud to cover its approach, the U-boat was already well submerged when the depth-charges exploded. However, a large patch of oil appeared on the surface shortly after the attack.

By the middle of 1942 the increasing shipping losses in the **Atlantic** and the contemplated large-scale movement of United States forces to **Europe** had brought fresh consideration by both British and American Chiefs of Staff of the best means of countering the growing menace of the U-boat. The Americans at first urged the bombing of the U-boat building yards and bases, but when the severe limitations of bombing attacks on these targets were pointed out, ³ they agreed with the British view that the best method of dealing with the U-boats was to intensify the air attacks upon them at sea, particularly in the transit area of the **Bay of Biscay**. While this policy was being agreed upon, certain developments were taking place with regard to the weapons and tactics which the aircrews of **Coastal Command** were employing against the U-boats.

It had already become evident that a more effective weapon than the Amatol depth-charge was required if the attacks on U-boats by aircraft were to inflict greater damage. Indeed in the first two years

¹ Wing Commander M. A. Ensor, DSO and bar, DFC and bar; Manuka Bay, Cheviot; born Rangiora, 5 Jan 1922; shepherd; joined **RNZAF** July 1940; commanded No. 224 Sqdn, 1945.

² Flight Lieutenant M. B. Neville; **New Plymouth**; born Ballarat, **Australia**, 20 Aug 1912; secretary; joined **RNZAF** Jul 1940.

³ In the French Atlantic ports, the U-boats were small targets in well protected shelters, and their crews were generally out of harm's way.

of the war, of over 300 attacks carried out by aircraft only seven had succeeded in causing complete destruction of the U-boat. Trials made at the end of 1941 with depth-charges filled with torpex showed that their underwater efficiency was considerably greater than those in which TNT or Amatol was used. By May 1942 a regular supply became available and they were soon in general use.

Much thought and attention had also been given to the possibility of equipping anti-U-boat aircraft with searchlights, an idea originated by Squadron Leader Leigh ¹ of the **Royal Air Force**. During trials in December 1941 the target was held without difficulty when flying down to within fifty feet of the sea. The Leigh Light, as the new weapon came to be known, was first fitted to Wellington aircraft. A powerful carbon arc searchlight was mounted in a retractable under-turret and controlled by an operator sitting in the nose of the aircraft, where indicators showing the direction in which the searchlight was trained enabled him to aim the beam before the light was exposed. The Wellington could thus approach unobserved and make an attack a few seconds after showing the searchlight. Later a nacelle type of searchlight was fitted to the wings of Catalina and Liberator aircraft. Successful operation of the Leigh Light, however, was only possible in close conjunction with radar. In fact the closest co-operation between the radar operator, the pilot, and searchlight operator was necessary in order to make a successful

attack. As soon as a radar contact was received, the pilot would be 'conned' on to his target by the radar operator, who would call the range indicated on his screen as the aircraft closed for the attack. The navigator would supply any corrections for drift. At a range of approximately three-quarters of a mile, the light would be switched on when only a small degree of movement was usually necessary in order to illuminate the target. Immediately this occurred, the aircraft reduced height and made the normal depth-charge attack.

A flight of searchlight Wellingtons began to train in February 1942, but it was not until June that a full squadron, No. 172, became operational. The results achieved during the first few months' operations were very encouraging. The first night the Leigh Light Wellingtons were on patrol two U-boats were sighted and attacked, and early in July another was sunk outright. The U-boats had considered themselves safe on the surface by night and had regarded their lookouts as superior to those in aircraft. Now the first indication of the approach of danger was the blinding beam of the

¹ Wing Commander H. de V. Leigh, OBE, DFC, AFC; born **Aldershot**, Hampshire, 26 Jul 1897; entered RNAS 1915; served **RAF** 1918–19; rejoined **RAF** Sep 1939; Personnel Staff Duties, **Coastal Command**, 1939–45.

searchlight when it was too late for anything to be done. As more aircraft were fitted with the new weapon, the number of sightings and attacks rose sharply.

Several New Zealanders flew in the crews of the first Leigh Light aircraft of No. 172 Squadron. They included Flying Officer Robinson, ¹ Flight Sergeant Burns ² and Sergeant Gregory. ³ Pilot Officer Brown ⁴ was the squadron's radar officer. A typical attack in which Burns took part was made on the night of 26 October. His Wellington was on patrol over the **Bay of Biscay** in the early hours when a radar contact indicated a possible U-boat five miles to starboard. The aircraft turned and reduced

height as it 'homed' on the contact. When the range had been closed to approximately half a mile, the searchlight was switched on to illuminate a U-boat travelling at high speed on the surface. The Wellington attacked at once and depth-charges appeared to fall close to the enemy vessel along her starboard side. A few minutes later the U-boat was seen lying stationary on the surface, just ahead of the spot where the depth-charges had exploded. The Wellington then made a machine-gun attack, to which the Germans replied with fire from their deck gun. Shortly afterwards the U-boat disappeared and, in spite of a prolonged search, was not seen again.

Coincident with the introduction of the Leigh Light and the torpex-filled depth-charge, **Coastal Command** made further improvements in the tactics employed in hunting and attacking enemy submarines by day. Foremost among the new developments was the introduction of what came to be known as 'baiting tactics'. Previously, after attacking a U-boat, aircraft had remained in the vicinity for a short period and then, if the U-boat had not reappeared, proceeded on patrol. At the end of March 1942 captains were ordered, when attacking a U-boat, to drop a marker and, after a short search, to leave the area and remain outside a range of 30 miles for some twenty to thirty minutes. The aircraft was then to climb to 5000 feet, or into the cloud base if it was lower, and return to the scene of the attack, where a further search was to be made in the hope that the U-boat commander, on observing through his periscope that no aircraft was in sight, had surfaced again. Another development was a change in the water spacing of depth-charges. From the middle of May all aircraft carrying six or more depth-charges were ordered to adjust bomb

¹ Flight Lieutenant J. N. Robinson; **Auckland**; born Milton, 21 Sep 1918; railway porter; joined **RNZAF** Nov 1940.

² Flight Lieutenant W. R. Burns; born **Devonport**, England, 10 Jun 1912; farmer; joined **RNZAF** Jan 1940; died 23 May 1949.

³ Warrant Officer H. L. Gregory; Dunedin; born Dunedin, 16 Sep 1919; lithographer; joined **RNZAF** Jul 1941.

⁴ Flying Officer A. J. C. Brown; **Auckland**; born **Auckland**, 24 Sep 1916; soft goods cutter; joined **RNZAF** Dec 1940.

distributors so that the spacing of the depth-charges on entering the water would be 36 feet. It was expected that, with the new torpex-filled type spaced at this distance, at least one depth-charge in a well aimed straddle would prove lethal, provided the U-boat had not submerged for more than twenty seconds. After that period, up to forty seconds, it was anticipated that the U-boat would at least be severely shaken and probably suffer some damage. To defeat the efficient lookout which the U-boats maintained while on the surface, patrol heights were now arranged so that cloud cover was used to the maximum to give concealment to the hunting aircraft. Finally, in July, a more efficient signals procedure was adopted for aircraft reports of U-boat sightings and attacks. This enabled closer co-operation with surface vessels to be achieved, and also made it possible for other aircraft in the vicinity to be directed to the scene of an attack to carry out exhaustive searches. Unfortunately, however, insufficient aircraft still made it impossible to carry out the 'hunts to exhaustion' which became a feature of tactics in the following year. Nevertheless, **Coastal Command** now became a more effective force capable of playing a major part in the defeat of the U-boat menace, and during the second half of 1942, in addition to many damaging attacks, no fewer than 24 German U-boats were sunk outright by air assault. This was more than three times the number destroyed by such attack during the first two and a half years of war.

The introduction of the Leigh Light aircraft in June marked the first stage in the intensification of the offensive against the U-boats in the **Bay of Biscay**. During the following months, as more aircraft and airfields became available in south-west England, the weight of this offensive increased steadily, while the fitting of aircraft with improved radar and the more general use of the torpex depth-charge, set to

explode at 25 feet, served to improve the effectiveness of the air attacks. The success of night operations in June caused the enemy to change his tactics of crossing the Bay submerged by day and surfacing only by night, and many U-boats now reversed this procedure and relied on their lookouts to protect them from attack. This they regarded as preferable to the sudden and unexpected approach of aircraft at night. The reappearance of U-boats on the surface by day provided welcome opportunities for action, and during the autumn the number of sightings and attacks rose considerably. New Zealanders with the operational squadrons in south-west England took part in a number of these encounters. On one patrol Sergeant Turnbull ¹ was flying as co-pilot

¹ Flying Officer B. W. Turnbull, DFC; [Invercargill](#); born [Wellington](#), 11 Jul 1915; school teacher; joined [RNZAF](#) Jan 1940.

of a Liberator when a surfaced U-boat was sighted. A down-sun attack achieved complete surprise, five men being plainly visible on the conning tower as the Liberator swept over it. The depth-charges straddled the U-boat, which rose half out of the water as they exploded and a large black metal object, possibly one of the hydroplane guards, shot some fifty feet in the air. When the spray subsided, the U-boat lay stationary on the surface. It then slowly submerged until only half the conning tower remained above the water. A few moments later it suddenly surfaced again, obviously in difficulties. There was a large patch of oil in the middle of the explosion marks and a trail of oil was issuing from the submarine. The Liberator attacked again with cannon and machine-gun fire, after which the U-boat slowly submerged once more.

The enemy now gave tacit admission of the embarrassment that the air patrols were causing by transferring aircraft from other fronts to carry out fighter patrols over the Bay and provide protection for his U-boats. The British aircraft thus faced increasing opposition and the number of combats mounted steadily. On 15 September the Whitley in

which Pilot Officer Coates ¹ and Sergeant Coburn ² were flying on patrol over the **Bay of Biscay** was forced down some 150 miles west of **Brest**, after making a gallant effort to reach base following an encounter with several enemy aircraft. Both men lost their lives.

The wireless operator of another Whitley, Sergeant Robison, ³ although badly wounded, survived to become a prisoner of war after his machine was shot down. Of the encounter with Junkers 88s he writes:

We were detailed to fly an anti-submarine patrol over the **Bay of Biscay** from our base at Chivenor, North Devon. The first leg of the patrol started at Bishop's Rock and ended at the Spanish Coast. Both this and the short leg along the Spanish Coast were uneventful. But when we were about half way on the homeward flight, three Ju 88s were sighted. They immediately closed and began to attack us. Our captain and myself had been similarly attacked a few weeks previously when flying with another crew and after fighting off the enemy's first attacks, had made for cloud and eluded them. But this time there was no cloud so we tried the old trick of diving close to the sea and lowering the flaps. But this manoeuvre proved fruitless as the Germans came in one after another, raking us with cannon and machine-gun fire. The rear gunner was killed and the second pilot wounded in the back. Our pilot did his best to evade each attack but the enemy machines were so close that he had little room in which to manoeuvre. Had got the wounded men into the crash position and was

¹ Pilot Officer A. E. Coates; born **Auckland**, 15 Dec 1911; machine fitter; joined **RNZAF** Feb 1940; killed on air operations, 15 Sep 1942.

² Sergeant A. B. Coburn; born Hairini, **Te Awamutu**, 26 Jul 1915; credit manager; joined **RNZAF** Aug 1941; killed on air operations, 15 Sep 1942.

³ Warrant Officer M. E. Robison; **Lower Hutt**; born Tolaga

Bay, 21 Jun 1919; farmer; joined **RNZAF** Dec 1940; p.w. 30 Sep 1942.

taking down our position to put in the container on the pigeon's leg when a sustained burst tore into the machine, hitting the navigator, second pilot and myself. The port motor was now on fire and the captain was forced to land on the sea. Then before the aircraft sank, we managed to get the wounded men into the dinghy only to find it had been peppered with machine gun fire. However, by plugging holes with handkerchiefs and plugs, then baling hard, we kept it afloat. The navigator, shot through the back, and the second pilot, whose shoulder had been torn off, were given morphia. We were barely clear of the spot where the Whitley had gone down when the depth-charges exploded. Fortunately this attracted the attention of a French fishing boat which picked us up half an hour later. But our navigator was already dead, and the second pilot died before we were landed at a French port.

Another bomber piloted by Sergeant Denham ¹ was attacked in the Biscay area on 17 December by four Junkers 88s. Again the aircraft was forced to land in the sea and all the crew were lost.

Nevertheless, aircraft continued to harass the U-boats and to inflict such damage that the German Naval Command began to seek frantically for a means of countering the radar which they considered was largely responsible. Their deduction was correct. Improved radar equipment had now been fitted to more of Coastal Command's anti-submarine aircraft and, as crews acquired experience in its use, it led to a steady increase in the number of sightings and attacks.

In September 1942, however, the Germans were successful in introducing a search receiver capable of picking up the transmissions from the aircraft's radar. It was, in many ways, a makeshift equipment, but its operational success was undeniable. Aircraft could now be detected by the U-boats at ranges which allowed them ample time to dive before they were attacked. The night patrols and, to some extent,

those in daylight were thus nullified. Not until the advent of new radar equipment whose transmissions could not be detected by the German submarines, was it possible to make the Biscay patrols fully effective and regain the initiative. In the meantime, strenuous efforts were made to counter the advantage the enemy had gained. In an attempt to keep his U-boats down by night and force them to surface by day, the number of night patrols was increased and crews were ordered to fly as high as possible in order to flood the area with their radar transmissions. Day patrols were then flown on the fringes of the transit area where the U-boats would be most likely to surface. However, in spite of much patient and persevering effort, the results of these tactics were negligible. By December the number of sightings and attacks had fallen to a very low figure.

¹ Sergeant M. T. Denham; born **Christchurch**, 2 May 1911; display manager; joined **RNZAF** Sep 1941; killed on air operations, 17 Dec 1942.

From August 1942 the squadrons engaged in hunting U-boats in the **Bay of Biscay** were supplemented by Whitley aircraft and crews from one of the bomber training units, and New Zealanders were among those who flew anti-submarine patrols for a short period at the conclusion of their training. These men were inexperienced in this type of work, which differed fundamentally from bomber operations, but their patrols did help to increase the pressure against the U-boats on passage. During the period of their attachment to **Coastal Command**, the bomber crews operated from the airfield at St. Eval in **Cornwall** where two experienced New Zealand pilots, Squadron Leaders G. R. Coates and C. P. Towsey, were posted to command operational flights. Both men had already flown many bombing sorties against targets in **Germany**, and in February 1942 Coates and Towsey each captained aircraft which dropped paratroops in the Bruneval raid. Now they flew anti-submarine patrols over the **Bay of Biscay** and organised the operations of the newly trained bomber crews. On one occasion after his Whitley had been forced down

on the sea with engine trouble, Coates spent 31 hours in a dinghy with his crew before they were picked up. After a long search their dinghy had eventually been found by Towsey, who was able to direct a destroyer to the rescue. Shortly afterwards Coates assisted in the rescue of another crew lost in similar circumstances when he located their dinghy in the [Atlantic](#).

Such ordeals befell a number of crews flying over the sea. In June 1942 Warrant Officer Shakes,¹ a navigator, shared a remarkable experience with his crew of a Sunderland flying boat operating from a West African base. They were returning from convoy patrol when sudden engine failure forced their flying boat down on the sea, about 200 miles from the nearest land. There was a heavy swell running and the Sunderland struck the water sharply, bounced in the air several times, and finally broke apart. The Canadian captain suffered severe injury to his spine during this landing and another member of the crew was killed. The others succeeded in getting the injured pilot into one small rubber dinghy and paddled clear. A few moments later the depth-charges exploded and the Sunderland disappeared in a mass of foam. The small three-man dinghy was unable to bear the strain of a triple load and one of the compartments burst, so the men got out leaving their captain lying inside. Those who had life-jackets tied themselves to the dinghy, while the others sat on the ropes hanging round it. As no distress signal had been sent out owing to the suddenness of the crash, there was some doubt whether they would be found. Next morning searching aircraft were seen in the distance, but it was not

¹ Flight Lieutenant D. T. Shakes; [Wellington](#); born [Wellington](#), 5 Jan 1921; clerk; joined [RNZAF](#) Oct 1939.

until late afternoon that a Hudson sighted the survivors and their dinghy. It dropped food, four one-man dinghies, and a cheering message. Eventually this aircraft had to leave, and a storm prevented a relieving Sunderland from reaching the area till after nightfall, when it could not

locate the dinghies. That night one of the crew died from exposure. The next day poor visibility prevented searching aircraft from finding them again until the afternoon, when the original Hudson crew led a destroyer to the scene and the exhausted men were picked up.

In the small group of New Zealand airmen who flew with the anti-submarine squadrons based in **West Africa** during 1942, Pilot Officer Wakelin ¹ and Warrant Officer Shakes, who were with No. 204 Sunderland Squadron, were among the first navigators trained in New Zealand to reach England in June 1940. At the end of that year both men had gone to **Iceland** with this squadron, which flew the first anti-submarine patrols in that area. The aircrews experienced a violent change of climate when, towards the end of 1941, the Sunderlands were transferred to operate from Bathurst, **West Africa**. Another New Zealander who flew with the same squadron during this period was Squadron Leader Evison. He had previously flown with the pioneer Sunderland squadron at **Freetown** and, after a period as a flying instructor in the **United Kingdom**, had returned to **West Africa** in August 1942 as a flight commander with No. 204 Squadron. A few months later he was appointed to command the unit.

* * * * *

The failure to maintain the offensive against the U-boats in transit across the **Bay of Biscay** was reflected in the main battle which had been resumed earlier in the year in the **North Atlantic**. When, in July, the enemy withdrew the majority of his U-boats from the American seaboard, he distributed them mainly in this area, and there began the most bitter stage of the Battle of the **Atlantic**— the all-out attempt by the enemy to seize victory by cutting the convoy routes which linked Great Britain and **North America**. The battle was to continue through the worst autumn and winter of the war and culminate in March 1943, when the enemy came very close to achieving his aim.

Unfortunately the Allies still lacked the aircraft and escort vessels to protect convoys in every area in which the enemy might strike. On the

other hand, the Germans now possessed a greatly expanded fleet of U-boats to which new boats were still being added faster



BATTLE OF THE ATLANTIC

¹ Flight Lieutenant W. J. Wakelin, DFC; England; born **Petone**, 5 Jan 1913; salesman; joined **RNZAF** Nov 1939.

than we could destroy them. They included improved types of submarine with longer endurance, and supply vessels to increase their range still further. It was soon obvious that the enemy intended to use his expanding U-boat fleet with even greater originality and skill. During August, heavy attacks on **Atlantic** convoys took place both by day and by night, one convoy losing eleven ships in a series of encounters extending over four days. Allied losses for the month rose to over half a million tons.

The opportunities for aircraft to counter these blows were reduced by the fact that the enemy scored the majority of his successes in that gap in the **Atlantic** which lay outside the range of air cover from either **Iceland** or **Newfoundland**. During the following months many convoys were severely mauled in this area, but it was noticeable that as they came within air protection the U-boat packs broke and the convoys proceeded more freely. The air patrols forced the U-boats to submerge

and so lose contact with the convoy they were shadowing and attacking. But the small number of long-range aircraft available for operations over the **North Atlantic** was still the main problem. All that were available at this time were one squadron of Catalinas and one of Liberators. No. 120 Liberator Squadron, which included several New Zealanders, did valuable work in breaking up concentrations of U-boats, often at great distances from its bases in **Iceland** and Northern Ireland. On one occasion, while escorting a convoy at extreme range to the south of **Iceland**, a Liberator from this squadron sighted no fewer than eight U-boats round the ships. It was only possible to carry sufficient depth-charges to attack two U-boats, one of which was sunk outright. Five of the others were, however, attacked with cannon fire and forced to submerge, with the result that no ships were lost while the aircraft was in company.

Meanwhile the medium-range aircraft continued to fly constant patrols in the inner area, within a radius of 400 miles from the **United Kingdom**. Because of the considerable air striking force which could now be brought to bear in this region, the U-boats seldom ventured inside it, and consequently opportunities for attack were few. However, on one patrol Flying Officer Ensor caught a U-boat on the surface in this area and delivered an excellent attack. The Hudson was flying above broken cloud when the enemy submarine was first sighted travelling at full speed on the surface. By turning immediately and diving to sea level Ensor achieved almost complete surprise. Fire was opened by the forward guns during the approach and hits were seen on the conning tower and superstructure. Four depth-charges were then dropped as the Hudson swept over the U-boat. The first two straddled the still surfaced submarine and its bows were blown out of the water by the explosions. When they had subsided, the U-boat was no longer visible, but the conning tower reappeared shortly afterwards and remained above the surface for a few moments before finally submerging. Then large air bubbles appeared and persisted for a short period. Ensor adopted baiting tactics but the U-boat was not seen again.

Good work was done during October and November 1942 by the new

Fortress Squadron, No. 206, from the windswept base at Benbecula, in the Outer Hebrides. Flight Sergeant Ackerman ¹ and Sergeant Wilson ² both took part in attacks made by the squadron during these months. On 27 October a U-boat sighted and attacked by Fortress aircraft was sunk outright. But the enemy continued his attacks on convoys in mid-Atlantic with ruthless and relentless vigour. October proved to be a disastrous month for the Allies when over 600,000 tons of merchant shipping were lost. The situation in the North Atlantic was rendered more serious by the withdrawal, at the end of this month, of surface escorts and aircraft for the protection of the North African expedition. On 28 October the First Sea Lord declared: 'The U-boat menace is now so serious that it should be tackled with all the means we possess', and a fortnight later General Smuts, speaking in London, warned that 'Hitler builds his hopes on the U-boat. ... Germany is making an unprecedented concentration of materials, man-power and engineering resources to build and operate U-boat packs. In spite of all our efforts, the U-boat campaign is on the increase.'

These forebodings were soon justified. During November more than 700,000 tons of merchant shipping were lost by U-boat action alone. It was the worst month of the war. Yet there was one consolation in that, early in the month, the Allies were able to make the landings in North Africa with only small losses.

The large concentrations of shipping in British and American ports towards the end of October did not escape the notice of the Germans, who realised that an Allied expedition was about to be launched. But encouraged by the American occupation of Liberia and by persistent references in the Allied press to the significance of Dakar, they were led to believe that the blow was to be directed against that area. Accordingly the Germans laid an extended patrol line of U-boats in the wrong part of the Eastern Atlantic. The first North African convoys sailed on 19, 22, and 23 October, and during the following weeks the maximum air effort was maintained,

¹ Flight Lieutenant J. D. Ackerman, MBE; England; born **Masterton**, 6 Jul 1921; civil servant; joined **RNZAF** Oct 1940.

² Sergeant G. C. Wilson; born **Invercargill**, 4 Oct 1921; salesman; joined **RNZAF** Feb 1941; killed on air operations, 14 Dec 1942.

each convoy being given continuous escort throughout the hours of daylight while, at the same time, offensive patrols were flown over the U-boat outlets in the **Bay of Biscay**. No serious threat developed and the ships proceeded unmolested to the Straits of Gibraltar, through which they passed on the night of 5 November. The closest protection was now provided by aircraft based at Gibraltar, and the convoys were able to reach their assault positions on 8 November with only one American ship damaged. In his despatch on the North African campaign, General Eisenhower comments:

Submarines constituted the biggest menace of the whole enterprise. The three great convoys each spread out over thirty or forty square miles of sea, offered magnificent targets, but skilful routing and vigilant escorts both naval and air were responsible for the highly satisfactory fact that all three convoys reached the African Coast unscathed.

However, once the landings began, the enemy reacted with alacrity. Italian and German submarines in the **Mediterranean** were rushed westwards, while those outside either attempted the passage of the Straits or else concentrated on the supply routes to the west of Gibraltar. But the Allied defences were to prove superior to the sustained assault which now began, and during the next three weeks nine U-boats were sunk in the Western Mediterranean—four by air attack alone, four by surface vessels, and one by combined attack. Others were damaged and few ships were lost. At first air patrols in the vital area could only be flown from Gibraltar, ¹ but soon after the landings began, aircraft were transferred to operate from Tafaroui, near **Oran**, and from Blida, near **Algiers**. At Gibraltar the small sandy plain, a racecourse in former days,

which joins the Rock to Spanish territory, had been converted into an airfield at the outbreak of war and a tarmac strip now extended well out into Algeciras Bay. There was also a flying-boat base from which Catalinas flew long-range patrols. Tafaroui had fairly good runways, but servicing the aircraft was difficult during the first few days because of lack of tools and equipment. However, the ground crews worked hard and proved adept at improvisation. They had landed with the Americans; when the airfields were captured they exchanged tommy guns for spanners and set to work as the aircraft flew in from Gibraltar. Blida was an established airfield, and the squadrons fared better there as regards the maintenance of their machines. There were no runways, however, only a surface of hard mud. Throughout November flying conditions were generally good, with visibility almost unlimited except during the heavy but infrequent

¹ It was, in fact, **Britain's** possession of Gibraltar which made possible the invasion of North Africa, for in November 1942 the Allies held no other single piece of land in all Western Europe and the **Mediterranean** west of **Malta**.

storms which passed quickly. On most days conditions were ideal for carrying out surprise attacks on U-boats, since aircraft patrolling at heights between 5000 and 8000 feet were, with few exceptions, flying either through, or over, broken cloud, with excellent visibility down-sun.

New Zealanders flew with both the Hudson and Catalina squadrons which escorted convoys as they approached North Africa. The Hudsons also covered the actual landings at **Oran** and **Algiers**, flying anti-submarine patrols outside the destroyer screen. Squadron Leader Patterson, Flight Lieutenant Holmes, ¹ Flying Officers Ensor, Mitchell ² and Poole, ³ who were with No. 500 Hudson Squadron, had particularly good hunting during the first fortnight. Mitchell was squadron navigation officer; the others all captains of aircraft. On 6 November, two days before the actual landings, Poole had the rare experience of attacking two U-boats in the course of the same patrol. In his first

encounter the U-boat was sighted in the act of diving, and by the time the Hudson reached the spot it had been submerged for some twenty seconds. Nevertheless, the four depth-charges dropped must have shaken the submarine severely for its stern rose again above the surface for a few moments before it finally disappeared. In the second attack the U-boat had dived about a minute before the aircraft reached it and no results were seen. On patrol the following day, Patterson sighted and attacked a U-boat shadowing one of the convoys. The ships proceeded unmolested. A few days later he sighted another submarine but it submerged before he could attack. Employing the skill and patience derived from long experience in hunting U-boats, Patterson flew away but returned an hour later, using cloud to conceal his approach. His perseverance was rewarded when, shortly afterwards, a U-boat was seen resurfacing. Manoeuvring his Hudson among the clouds, Patterson succeeded in delivering a completely surprise attack, after which his crew were amazed to see the U-boat in an almost vertical position with some twenty feet of its hull above the sea. It remained thus for nearly a minute, 'bobbing up and down like a cork' before it disappeared. Then large gushes of air and oil came to the surface and continued to rise for some time. In another attack on 17 November Patterson again caught his target unawares and straddled it with depth-charges. As they exploded, the U-boat's stern was lifted out of the water and the conning tower stove in. Attempts were made by the crew to man the machine guns but this

¹ Squadron Leader H. G. Holmes, DFC and bar; born Rangiora, 31 Aug 1916; joined **RAF** Jun 1939.

² Squadron Leader I. R. Mitchell, DFC; **Wellington**; born **Napier**, 24 Jun 1916; farmer; joined **RNZAF** Dec 1940.

³ Flight Lieutenant H. A. Poole, DFC; **Invercargill**; born **Invercargill**, 6 Mar 1920; clerk; joined **RNZAF** Feb 1940.

was prevented by fire from the Hudson. Some of the Germans then leapt over the side as the U-boat was on fire at the stern. Others came on deck waving their shirts as a token of surrender. As it was now certain that the U-boat was disabled and other aircraft had reached the scene, the Hudson proceeded to a nearby naval airfield to report. A destroyer was sent out from [Algiers](#) to capture the U-boat and Patterson refuelled his aircraft and set out to act as guide. Unfortunately, when the destroyer was only ten miles away, a naval aircraft, in spite of frantic signals, made a torpedo attack on the U-boat which exploded and sank. A valuable prize was thus lost.

Holmes made five attacks within thirteen days. On patrol to the east of Gibraltar two days before the landings, he sighted and attacked a U-boat which was shadowing a naval force. A large piece of metal was seen to fly into the air in the midst of the explosions, and after the disturbance subsided there was no sign of the U-boat except large oil and air bubbles which were coming to the surface. On another occasion Holmes stalked his prey through cloud for some 15 miles before diving to release his depth-charges. Afterwards large air bubbles were seen as if the U-boat was attempting to resurface. Then oil began to come up and spread across the sea until, by the time the Hudson left the scene, it covered a considerable area. On 14 November Mitchell's Hudson was one of several aircraft which so damaged a U-boat that it finally ran ashore near [Oran](#). On patrol a fortnight later Mitchell sighted what appeared to be a small ship some twelve miles away. Closer investigation revealed a large German submarine on the surface, which dived as the Hudson drew near. A sharp depth-charge attack brought oil and some light wreckage to the surface.

On 16 November Ensor made what was probably the most spectacular attack of the whole war. He was flying on patrol near [Algiers](#) when a U-boat was sighted on the surface about ten miles away. By making a careful approach through cloud Ensor was able to attack before the enemy could submerge, and his depth-charges straddled the submarine just ahead of the conning tower, one of them actually

striking the hull. Two seconds after their release there was a violent explosion as the U-boat blew up and dis-integrated—the forward guns went in one direction and the conning tower in another. When the spray of the explosion had subsided only the bows remained on the surface in the middle of an area of oil, wreckage, and air bubbles. The force of the first explosion severely damaged the Hudson. The elevators were torn off, leaving the rudders hanging by their lower hinges, while each wing tip was bent upwards. In addition, the turret and cabin floor were blown in and instruments damaged. It was only with the greatest difficulty that the Hudson could be kept under control. Ensor therefore ordered the wireless operator and the navigator towards the rear of the aircraft. Then, by opening up the engines and beckoning the crew backwards and forwards, he kept the machine trimmed and turned towards the coast. A few minutes later one of the engines failed and the aircraft began to lose height, so Ensor ordered his crew to bale out. He remained at his post until they had done this and then followed. Two of the crew, including Ensor, were picked up twenty minutes later by naval vessels, but the others were lost.

Four days previously Ensor had made another excellent attack. He was flying just above cumulus cloud at 7000 feet when a fully surfaced U-boat was sighted through a clear patch. He immediately turned and dived to attack. The target was reached just after it had submerged so the depth-charges were aimed slightly ahead of the swirl. A few moments later the U-boat heaved up amidst a mass of foam and air bubbles. Several of the crew then appeared on the conning tower bridge and opened fire with a machine gun, but this was silenced by return fire from the aircraft. More men now appeared on deck as the U-boat slowly circled with its bows awash. A second attack by the aircraft sent at least six of them overboard. For the next half hour the Hudson circled the enemy, opening fire whenever any movement was seen on the conning tower, and when finally forced to leave owing to shortage of fuel, the crew saw the U-boat was still circling slowly and sinking lower in the water.

There were also several encounters with enemy aircraft during the month. On one patrol Poole sighted a Junkers 88 shadowing one of the convoys carrying equipment to North Africa. In the ensuing combat the enemy aircraft was damaged and driven off. On another occasion Holmes sighted an Italian fighter flying below him. He immediately closed on the enemy machine and his first burst hit the rear gunner. He continued firing and then turned so that his own gunner could fire on the enemy. Shortly afterwards the Italian aircraft crashed into the sea. This machine was in company with an Italian submarine, which was in turn attacked by another Hudson captained by Patterson. He was flying on a parallel patrol to Holmes and actually sighted the surfaced submarine while the combat was in progress. A number of its Italian crew who had come on deck to watch the aerial engagement were apparently so absorbed that they failed to notice the approach of the second Hudson.

In addition to the Hudsons long-range Hurricane fighters, fitted with extra fuel tanks, had escorted the convoys to the shores of **Africa**. The pilots found this a difficult and uncomfortable task, for the Hurricanes were not easy to fly with the extra load and it was hot and cramped in the small confined cockpit on long patrols. But the monotony and discomfort were sometimes relieved. One day Sergeant Ashworth,¹ who flew with the first Hurricane squadron to land in North Africa, sighted a Junkers 88 which was attempting to attack the convoy. He dived on its tail and opened fire, then 'had to break away as bits and pieces flew around him'. Both the Junkers' engines caught fire and it crashed into the sea.

By the end of November the enemy was forced to reduce the scale of his efforts in the Western Mediterranean; most of his U-boats were withdrawn and transferred to the **North Atlantic**. In their operations against the **Mediterranean** convoys, amply provided with air cover, they had suffered heavy casualties and sunk comparatively few ships. The wear and tear of constant crash-diving had been extremely severe on the U-boat crews and had intensified the dislike felt by their captains for the

narrow waters of the **Mediterranean**. It was with considerable relief that they returned to their old hunting grounds on the convoy routes in the **North Atlantic**.

By December 1942 the enemy had nearly 100 U-boats continuously at sea, the majority patrolling in the **North Atlantic**. Spread in long lines across the convoy routes, one or other of them would sight and shadow a convoy while the packs concentrated for a series of attacks which might last for days. But in the area where aircraft from **Iceland** could provide cover at long ranges, the U-boats found these tactics difficult and three large convoys got through with a loss of only three ships. One of these convoys was persistently shadowed for several days and would probably have been the target for a large-scale attack had not the presence of aircraft on close escort and on offensive patrols along the flanks of the convoy prevented the U-boats from concentrating. New Zealanders flying from bases in **Iceland** and on the west coast of the **United Kingdom** continued to share in the task of protecting the trans- **Atlantic** convoys. Aircraft were now often 'homed' on to convoys by a special procedure which demanded considerable skill from the wireless operator. Often as a result of his efforts, much time was saved in searching for convoys, so that the time actually spent in protecting the merchant ships was correspondingly increased. An interesting example of this occurred on 14 December, when Sergeant Tingey² was responsible for the successful interception and escort of a convoy at an extreme westerly position. He was wireless operator of a Liberator aircraft flying from a base in **Iceland** on a patrol

¹ Flying Officer C. P. Ashworth; born Eketahuna, 25 Sep 1921; clerk; joined **RNZAF** Jun 1941; killed on air operations, 3 Aug 1944.

² Flying Officer N. R. Tingey; **Auckland**; born **Wellington**, 4 Feb 1920; salesman; joined **RNZAF** Oct 1940.

which lasted for over seventeen hours. As a result of his efficiency in

the homing procedure, the convoy was located without a search and the Liberator provided escort for a period of over five hours; during that time two U-boats were attacked in the vicinity of the ships.

After the disastrous losses which had occurred in the North Atlantic during previous months, it seemed that the Allies were getting the measure of the enemy, but towards the end of December an outward-bound convoy suffered heavily at the hands of the U-boat packs. This episode showed clearly that without the assistance of air cover, as was the case with this convoy, the surface escorts were incapable of warding off concerted attacks by packs of U-boats, often more than twice their own number. Yet there were still insufficient aircraft to provide protection at extreme ranges, and thus bridge the gap in mid-Atlantic- the 'black pit' that was out of range of aircraft based on either side of the ocean and in which so many ships had been lost.

'The warning is clear...,' wrote the First Sea Lord. 'We now face the necessity of having to fight the convoys through the U-boat packs. The number at sea is now so great that they can be disposed in such a way that evasion by our convoys becomes impracticable. We have reached the situation which has long been foreseen and for which the very long range aircraft is required.'

Altogether, during 1942, U-boats had been responsible for the loss of over 6,000,000 tons of Allied merchant shipping. This was nearly three times the figure of 1941. Furthermore, although more U-boats had been destroyed than previously, the rate of production of new boats still exceeded, by a large margin, the rate at which they were being destroyed. Nevertheless, in the face of the fierce and determined onslaught of the U-boats, the huge volume of Allied merchant shipping which crossed the Atlantic unmolested was remarkable. Over 34,000,000 tons of essential war cargoes, including some 11,000,000 tons of petroleum products, were landed in ports of the United Kingdom during 1942. This meant the safe arrival of over 4000 ships for these purposes alone, excluding the substantial number engaged in the transport of

troops or the convoys routed direct from the **United States** to North Africa or to theatres of war outside Great Britain. Part of the credit for this achievement was undoubtedly due to the efforts made by the aircrews of **Coastal Command**. Exhibiting both courage and endurance, they had flown tirelessly in all weathers to find and protect the merchant ships crossing the wide seas. Although, as the year drew to a close, the enemy appeared to have the advantage, the airmen were soon to receive reinforcements and technical aids which would enable them to strike blows from which he would not recover.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 15 – ATTACKING ENEMY SHIPS WITH MINE, BOMB AND TORPEDO

CHAPTER 15

Attacking Enemy Ships With Mine, Bomb and Torpedo

WHILE the main concern of the Allies in the war at sea during 1942 was the growing menace of the U-boat, surface units of the German Navy had still to be reckoned with. At the beginning of that year the new and powerful battleship *Tirpitz* came into full commission and joined the pocket battleships *Admiral Scheer* and *Lutzow* and the heavy cruisers *Admiral Hipper* and *Emden* in German home waters. These vessels not only represented a potential danger to Allied shipping in the **Atlantic**, but by moving into Norwegian bases they could also threaten the convoys now carrying supplies to **Russia's** northern ports. At the same time, three other units of the German Fleet, the battle-cruisers *Scharnhorst* and *Gneisenau* and the heavy cruiser *Prinz Eugen*, were in **Brest** and appeared likely to break out and attack convoys proceeding to and from Gibraltar. ¹

A further challenge to British air and sea power was the enemy movement of valuable cargoes along the European seaboard under cover of the **Luftwaffe** and escorted by smaller units of the German Navy. The shipments of ore from the extreme north were of particular importance. In fact, about half the iron ore imported by **Germany** at this time came from the Lulea mines in **Sweden**, much of it being shipped by way of Narvik, in northern **Norway**. The ships carrying this ore kept close to the Norwegian coast, following a tortuous route among the islands. This afforded them considerable protection, but at some points the vessels were forced to leave the inside route and thus became more exposed to attacks by British aircraft and submarines. Except in the winter months when ice in the entrance to the Baltic blocked their passage, this southbound traffic from **Norway** turned into the Skagerrak and passed through the **Kiel Canal** to unload at **Hamburg** and **Rotterdam**. The latter port, which was reached by a fairly well defined route along the Frisian Islands, received a large proportion of the traffic through the **Kiel Canal**, including cargoes from **Sweden** and **Finland** as well

¹ In the event **Hitler**, fearing an Allied invasion of **Norway**, ordered these ships north, and for some time most of the German Fleet was held in readiness to repel the expected attack. When this did not take place, the ships were used to attack Allied convoys to **Russia**.

as from **Norway**, so the Dutch coast offered another fruitful area for aerial attack. Farther south, in the **Bay of Biscay**, the Germans were using ships to carry ore from **Spain**, while blockade runners attempting to link up **Germany** and **Japan** sailed to and from the Biscay ports. Coastal shipping was also being used by the enemy to maintain his forces in **Norway** and to relieve rail and road traffic both in **Germany** and in the occupied territories. Its disruption would, therefore, increase the effect of the bombing attacks already being made against the enemy's transport system on land.

Throughout 1942 the **Royal Air Force** was able to give substantial assistance to the **Royal Navy** in restricting the movements of the enemy's major naval units and in dislocating his seaborne trade. Aircraft laid mines in enemy waters and attacked warships and merchant vessels both at sea and in harbour. Ocean sweeps and coastwise patrols were a daily task, the reconnaissance flights supplying useful information which supplemented the photographic cover of enemy ports, so that movements of both German naval and merchant vessels were kept under constant observation. In addition, reconnaissance and protection from U-boat attack were provided for ships of the Home Fleet when they put to sea.

The laying of mines from the air had previously been undertaken by the Hampdens of No. 5 Bomber Group and the Beauforts of **Coastal Command**. Ships at sea and in harbour had also been attacked by both bomber and coastal aircraft during 1941. But now Bomber Command assumed responsibility for all aerial mine-laying, while **Coastal Command** specialised in the more direct forms of attack with bomb and torpedo. In March 1942 it was decided to extend minelaying duties to

the Stirlings and Wellingtons of No. 3 Bomber Group and later, as aircraft were modified and stocks of mines and other materials became available, to the other groups. This use of heavier bombers with their greater load-carrying capacity brought about an increase in the number of mines laid from the air, while the number of sorties also rose as aircraft from other groups became available for minelaying operations. Whereas in February about 300 mines were laid by bombers, by June the total was over 1000. At the same time research and experiment were continued to improve existing mines and to produce new and more efficient types. Airborne acoustic mines, operated by sound waves sent through the water by ships, were now used by Bomber Command, and variations of this type and of the magnetic mine were also developed for dropping from the air. The Germans were continually searching for means of neutralising the British mines, and when it became evident that they had evolved a counter, new devices were quickly introduced to set them fresh problems. In fact, it became a battle of wits between the opposing groups of scientists and technicians.

Most of the New Zealanders serving with the medium and heavy bomber squadrons flew on minelaying sorties during 1942. This was specially true of the men flying the Wellingtons and Stirlings of No. 3 Group, a formation in which New Zealand representation continued at a high level. No. 75 Wellington Squadron operated with this Bomber Group, and in its first minelaying mission on the night of 27 April mines were laid off Heligoland. Thereafter aircraft from the unit participated frequently and by the end of the year 140 sorties had been flown, of which 105 were successful in laying a total of 233 mines, an effort which compared favourably with that of other units similarly engaged. Several aircraft from No. 75 Squadron were among those lost during the year while laying mines in enemy waters, but some of the crews survived to become prisoners of war. The New Zealand captain of a Wellington shot down over [Denmark](#) writes of his sortie on 17 May:

We were carrying four new-type mines to be laid in the Baltic. As this necessitated fixing a position on the coast and then dropping the mines

from about one hundred feet, we were advised to cross **Denmark** at very low level—partly to keep a more accurate track and partly to avoid enemy fighters. Had just crossed the coast on the way in when a burst of tracer came from below. I swung to port to avoid it, thinking it was ground flak. But it turned out to be a night fighter and the next moment the starboard inner was on fire. The oil tank behind the motor looked like a charcoal brazier, glowing redly through the bullet holes. As the mines were secret, I turned back towards the coast to try and dump them in the sea where they would become alive and defy investigation. But a few minutes later the main wing tanks went up and the fire spread rapidly. Ordered the crew out and followed immediately as we were very low. Pulled the ripcord right away. The burning aircraft crashed as the chute opened and by the light of the fire I made a good landing in a ploughed field a few moments later. My navigator was unfortunately killed by a last burst from the fighter before his chute opened. Was joined by other crew members and we made our way across country. But the short summer night was soon over and we were forced to hide until dusk. Then we approached an isolated house for food which was provided but we were captured as we were leaving. At a nearby **German Air Force** base we were told how we had flown over just as a patrol was taking off. Also found out that we had destroyed the fighter which shot us down. Just as my rear gunner was vacating his turret, the Messerschmitt came up close so he popped back in again and gave a burst at close range. It blew up.

A large part of the minelaying effort by the bomber aircraft during 1942 was directed to the areas along the enemy-held coast of the North Sea, particularly the Frisian Islands, and to a lesser extent the coast of south-west **Norway** and the entrances to the Baltic. The target for these operations was shipping carrying iron ore and other supplies from Scandinavian ports, and the sinkings which followed were the main reason for the Swedes withdrawing chartered ships from the routes. There was also dislocation of the transport of troops and military stores from German Baltic ports to the Russian front; moreover, it is now known that mines laid from the air in the U-boat exercising grounds in

the Baltic interrupted trials and training and caused delay in the appearance of prefabricated U-boats in the **Atlantic**. German U-boats were the main target of minelaying operations in the **Bay of Biscay**, where mines were laid in the approaches to the bases at St. Nazaire, **Lorient** and La Pallice. These operations achieved a fair measure of success since, in addition to several U-boats sunk or damaged, arrivals and departures were often delayed or even suspended while sweeping was in progress. The most significant mining operations in this area during 1942 were undertaken during October and November, in an effort to restrict U-boat activities against the large Allied convoys carrying troops and supplies for the landings in North Africa. During these two months 1024 mines were laid from the air in the Biscay area. Two U-boats were sunk by mines off the port of **Lorient** during October while a third, outward bound from La Pallice, was mined and severely damaged shortly after sailing. This mining from the air of the Biscay ports also helped to impede blockade running by the Germans. During 1942 both submarines and surface vessels were used to carry special cargoes to and from the **Far East**, but by the end of that year minelaying and the patrols and attacks of both air and naval forces had severely restricted this activity.

Altogether during the second half of 1942 a total of 6243 mines was laid in all areas by aircraft. This greater effort brought satisfying results, German losses from these mines amounting to 125 vessels sunk with a further 24 ships damaged. Coming at a period when the enemy already possessed an efficient and rapid sweeping organisation, these successes spoke well for the persistence of the aircrews and the skilful use of ingenious firing and anti-sweeping devices developed by British scientists and incorporated in the mines. But the Germans had already taken measures to meet the increased tempo of Bomber Command's operations. Night fighters now made more frequent interceptions, while anti-aircraft guns placed in the vicinity of the most vulnerable areas often gave the bomber crews a hot reception. What had previously been regarded as a comparatively easy mission became as hazardous as the attack of some land targets, owing to the low altitude at which the bombers had to fly in order to lay the mines accurately. The light flak

was extremely effective against large aircraft flying at 1000 feet or less and an increasing number of bombers were shot down, ¹ while many

¹ From July to December 1942, 105 aircraft were lost on minelaying sorties.

of those which did return bore marks of encounters with the enemy's defences. On some occasions it was only sheer determination on the part of the pilot which got the aircraft back safely. One night in November 1942 the Wellington captained by Sergeant Wright ¹ was among the small force detailed to lay mines at a certain point off the Dutch coast. On reaching the area the bomber flew inland in order to pinpoint a landmark from which it could return to drop the mines in the correct position. While crossing the coast, the Wellington was sharply engaged by ground defences and twice attacked by a night fighter. Both Wright and his navigator, Sergeant Johnston, ² were seriously injured when a shell exploded inside the aircraft. Although wounded in five places, including his right hand, and weakened by loss of blood and shock, Wright kept the machine airborne and, after the mines had been dropped, flew it back across the sea. Eventually, held and supported by his bomb aimer, he made a good landing at an airfield near the English coast and then collapsed at the controls as the aircraft came to rest.

* * * * *

The mining campaign against the enemy's sea communications during 1942 was supplemented by bombing and torpedo attacks by aircraft of **Coastal Command**, but because of the demand for increased air patrols in the **Atlantic**, relatively few squadrons were available for this task and their tactics and weapons were still in the early stages of development. Nevertheless, these more direct forms of attack were responsible for the sinking of 42 ships and the damaging of a further 21. But a heavy price was paid for these results as many crews were lost in the low-level bombing attacks.

Among those who flew Hudsons, Beauforts, and Hampdens on reconnaissance patrols and in attacks on enemy ships during 1942 were Wing Commander E. H. McHardy and Squadron Leader G. D. Sise, both of whom were later to win particular distinction as wing leaders in these operations. McHardy, who had flown with Coastal Command from the first months of the war and won commendation for his work in the early campaigns, now led No. 404 Hampden Squadron, while Sise, who had joined No. 254 Squadron towards the end of 1940, was a flight commander with his unit and frequently led formations in patrol and attack. No. 489 New Zealand Squadron, which had just been formed in **Coastal Command**, was to play a prominent part in anti-shipping duties during the second

¹ Flight Sergeant R. J. Wright, DFM; born Dunedin, 18 Sep 1913; warehouseman; joined **RNZAF** Sep 1941; killed on air operations, 26 Oct 1943.

² Warrant Officer H. R. Johnston; **Dannevirke**; born Woodville, 8 Dec 1918; clerk; joined **RNZAF** Apr 1941.

half of 1942, but unfortunately in the early months the unit experienced a period of difficulties and frustration. Training on Beaufort torpedo aircraft had almost been completed by January when, owing to the withdrawal of these aircraft from **Coastal Command** for urgent overseas requirements when production could not meet the increased commitments, the squadron was temporarily equipped with Blenheims. Training was then begun on these aircraft and continued during February, but crews had to contend with indifferent weather and shortage of dual aircraft. The new squadron suffered a further setback early in March when it was moved from Leuchars, in **Scotland**, to **Thorney Island** in the south of England. Meanwhile satisfactory trials had been carried out with Hampden aircraft and it was decided to allot this type to the New Zealand unit. The Hampdens began to arrive towards the end of March, when flying training and practice bombing

were continued.

The original role chosen for No. 489 Squadron was reconnaissance and strikes against enemy shipping plying between Spanish and enemy-occupied French ports, but the contemporary shortage of aircraft for operations against the U-boats crossing the Bay of Biscay led to the diversion of the squadron's major effort to anti-submarine patrols. The first sortie was flown on 11 May 1942 and throughout the next two months the patrols were continued, some extending as far south as the coast of **Spain**. No attacks were made on German submarines during these sorties, but this was not the result of any lack of keenness on the part of the aircrew. At this period the air patrols were forcing the enemy's submarines in the **Bay of Biscay** to surface mainly at night, and by helping to maintain the pressure day by day against the enemy the squadron made a contribution to the Battle of the **Atlantic** at a very difficult period.

The first patrols were not entirely without incident. On 22 May 1942, while returning from patrol in the **Bay of Biscay**, one of the Hampdens was attacked by a Heinkel about fifty miles south of Land's End. The rear gunner succeeded in driving off the enemy aircraft and no damage or casualties were suffered. A more serious encounter with enemy fighters, in which Flight Lieutenant Hartshorn and his crew were fortunate to survive, took place on 13 June, some 25 miles west of Ushant. The wireless operator, Flight Sergeant McGill-Brown,¹ was changing accumulators with the help of the rear gunner when by chance he looked up and saw two Focke-Wulf fighters diving in from the starboard quarter. He shouted a warning to Hartshorn, who immediately took the Hampden down to sea level and jettisoned the depth-charges. Then he

¹ Warrant Officer J. McGill-Brown; **Auckland**; born **Hamilton**, 15 Dec 1918; warehouseman; joined **RNZAF** Nov 1940.

began weaving violently, judging his moves by watching the line of

cannon shells churning up the calm sea. The enemy fighters had now closed in to point-blank range, and Brown, who was firing a machine gun through the starboard window, was hit by a cannon shell and fell back on the floor of the aircraft with his right knee shattered. At the same moment the navigator was knocked unconscious by shrapnel wounds in the back. In the rear turret the English gunner, Pilot Officer Jordan, ¹ who was giving avoiding directions to his pilot, held fire until one of the Focke-Wulfs filled his gun sight, then he gave it a long burst. The fighter turned sharply away and made off towards **France**, leaving a long wake of black smoke streaming from its engine. The second Focke-Wulf, however, continued to attack and made persistent efforts to silence the rear gunner. Meanwhile Brown, although bleeding profusely, had crawled back to his gun and, by clinging to the interior struts, brought it again into action. Shortly afterwards the enemy broke off the engagement and the Hampden landed safely at St. Eval half an hour later.

By the end of June more aircraft had become available to Coastal Command for the Bay offensive, and this enabled No. 489 Squadron to be withdrawn from operations to continue its training as a torpedo-bomber squadron. In the second week of July the unit moved to Tain, near Invergordon, where tactical torpedo training was resumed in earnest.

Altogether during the early months of 1942, the more urgent requirements of anti-submarine patrols and reconnaissance against enemy naval units considerably restricted the development of the direct attack on the enemy's coastal shipping. In particular, the potential breakout of the German battle-cruisers from **Brest** and the presence of other warships in Norwegian waters demanded the diversion of aircraft from other duties to watch these areas. However, as far as resources permitted, efforts were made to harass enemy shipping along the Dutch and Norwegian coasts and in the **Bay of Biscay**. Air operations in these regions were of two kinds: armed reconnaissance patrols, usually by single aircraft, and strikes on which several machines were despatched

to attack a specified ship or convoy. The low-level attack was still employed and the majority of the patrols were flown by Hudson aircraft.

It was while flying a Hudson on reconnaissance patrol over the North Sea one night towards the end of January that Flying Officer Ensor and his crew had a remarkable experience. Ensor had been detailed to search for enemy shipping from the island of Sylt, through the Heligoland Bight and along the Frisian Islands. Just south of Sylt a radar contact led to a sighting of three ships

¹ Flight Lieutenant S. J. Jordan, DFC; born Camberwell, London, 8 May 1918; joined RAF 1936.

threading their way through the ice floes. Ensor dived to mast height and aimed a stick of four bombs at the leading vessel. His rear gunner reported a direct hit on the stern. But the ships had already opened fire and, while taking evasive action, the Hudson struck a high rock. It bounced off and remained airborne but the starboard engine was disabled, the fuselage torn, flying instruments smashed, and the wireless and radar put out of action. Recovery from this predicament was made in a heavy snowstorm during which the crew lost their bearings. Soon they found themselves over land and a target for anti-aircraft fire and searchlights. It was some time before they could discover their position. The journey back across the North Sea had then to be made on one engine through ice-laden clouds and heavy snowstorms. Finally a landfall was made on the English coast and Ensor decided to force-land owing to shortage of petrol, the port tanks having been damaged in the collision. It was still snowing heavily, and his navigator fired all the Very lights in quick succession in an endeavour to provide some light as Ensor brought the Hudson down in an open field. He made a good landing and his crew were able to scramble out unhurt.

On occasion, the reconnaissance aircraft attacked ships and installations in enemy or enemy-occupied ports. Early in February Flying Officer Brice, piloting a Beaufort of No. 86 Squadron, bombed a

merchant vessel lying just off the port of Le Verdon. During his low-level approach Brice met considerable opposition from anti-aircraft batteries, and his machine was hit in the starboard engine and one of the turrets. On reconnaissance in the same area a few days later Brice sighted a convoy of four ships. He at once attacked the leading vessel from mast height and two of his bombs appeared to score direct hits on the forward part, which was afterwards seen to be blown off and awash. The ship sank a few minutes later.

During the early months of 1942, New Zealand airmen with **Coastal Command** were engaged with their squadrons in two major encounters with German warships. On 12 February there occurred the melancholy episode in which combined air and sea attacks failed to prevent the *Scharnhorst*, *Gneisenau*, and *Prinz Eugen* escaping up the Channel from **Brest** to German home ports. Squadrons from **Coastal Command** were involved in both torpedo and bombing attacks, but their efforts were frustrated by heavy opposition and the unfortunate circumstances in which the whole air assault was launched. At the beginning of the month the presence of the *Tirpitz* in Trondheim and of the three warships in **Brest** constituted two separate threats to British sea communications. While the reconnaissance forces available to **Coastal Command** were sufficient to establish with some regularity the presence of these vessels in their respective bases, the striking force available to attack them if they came out was small and ill equipped for the task. It consisted of three squadrons of Beauforts which were disposed as far as possible to meet the two threats. No. 86 Squadron, augmented by a detachment of No. 217 Squadron, was at St. Eval in **Cornwall**, while No. 42 Squadron was at Leuchars in **Scotland**; the remainder of No. 217 Squadron was at **Thorney Island**, near Portsmouth. New Zealanders were serving with each of these units. On 1 February all three warships at **Brest** were out of dock and, in spite of bombing attacks during January, it appeared that none of the vessels had suffered damage which would seriously affect its seaworthiness. Therefore on 3 February, after an Admiralty review of the situation, the plans which had been concerted to deal with the breakout of the enemy naval units were put into operation.

In **Coastal Command** this involved the arrangement of a full scheme of continuous reconnaissance patrols, both by day and by night. These were flown by Hudson aircraft equipped with radar. By 8 February it had become fairly clear that the most likely move of the cruisers from **Brest** was up the Channel, and it was therefore decided to concentrate the striking force of **Coastal Command's** torpedo-bombers. This decision was a difficult one to take since there was no guarantee that the *Tirpitz* might not break out from **Norway** at the same time as the cruisers from **Brest**. An added complication was the very bad condition of the aerodromes on the south-east coast owing to snow and ice. It was not until the morning of 12 February that the Beauforts of No. 42 Squadron were able to move south. Even then, owing to unfavourable conditions, the Beauforts had to be diverted to land at an airfield where further difficulties were experienced in refuelling and rearming. No. 86 Squadron, which had been retained at St. Eval until the last moment in case the cruisers should break out westwards, was ordered to **Thorney Island**, while No. 217 Squadron was moved to Manston, in Kent.

Meanwhile, during the night of 11 February the enemy warships had left **Brest** and, keeping well into the French coast under an umbrella of escorting fighters, had proceeded undetected up the Channel until eleven o'clock the following morning. This was largely due to radar failure on one of the night patrols and the fact that the early morning reconnaissance had not identified the enemy with certainty.

Immediately news of the breakout was received at **Coastal Command**, orders were given for the launching of a series of attacks by the torpedo-carrying aircraft. However, by the time the first Beauforts reached their target it was three o'clock in the afternoon and the German ships were off the Dutch coast, steaming at some 30 knots into an area where the weather was steadily deteriorating. Formations were broken, fighter cover was lost and, on flying in to drop their torpedoes, the Beauforts met fierce anti-aircraft fire from the three warships and their escorting destroyers. Crews reported that the barrage was so intense that the sky seemed full of it. Enemy fighters were also present in force, and in the face of the intense opposition and having regard to the uncoordinated

nature of the attacks, it is not surprising they achieved no success.

Among those who took part in the torpedo attacks was Squadron Leader Dinsdale, who led Beauforts of No. 42 Squadron. His machine was badly shot up while he was attempting to get near enough to the enemy vessels to release his torpedo.

Our squadron had left Leuchars, **Scotland**, that morning for Coltishall, landing there about mid-day. We were immediately informed that we were to carry out an attack on the German Fleet. The whole squadron, carrying torpedoes, eventually got off the airfield which was one sheet of ice, without mishap, and set course for Manston, where we were to rendezvous with fighters. After circling for some time, no fighters appeared so we set course for the Hook of **Holland**. Soon we ran into fog and low cloud and were right down on the sea. Then through a break in the cloud we saw our fighter escort which gave us added confidence. The first glimpse of the enemy ships reminded me of a large factory with smoking chimneys, as if we were going overland—an impression caused by aircraft burning on the water and gunfire and smoke from the ships. Our Beauforts deployed for the attack and I dropped my torpedo at what appeared to be the *Gneisenau*. On the actual run in to the target, which was only a matter of seconds, three aircraft fell into the sea in front of us and we were forced to climb to escape the flames. It was not possible to see the result of our attack as we were picked up by an enemy fighter and forced to head away.

Flying as navigator in another Beaufort was Flight Sergeant Keeling.¹ As his aircraft flew in to attack, it met thick anti-aircraft fire from destroyers forming a protective screen round the *Scharnhorst*—‘heavy shells were hitting the wave tops and light tracer was whizzing over the aircraft.’ The Beaufort was hit several times, the rear gunner wounded, and the top of the cockpit blown off. Then, while Keeling was giving first aid to the gunner, a German fighter appeared so he immediately took the wounded gunner’s place and opened fire. The enemy machine was eventually driven off. Another New Zealander afterwards told how his aircraft flew close to the enemy ships through the hail of fire; there

was 'one glorious moment' when they came within a few hundred yards of the *Scharnhorst* and were able to turn their machine guns on her decks.

¹ Flight Sergeant D. N. Keeling; born [Wellington](#), 28 Nov 1918; farmer; joined [RNZAF](#) Oct 1940; killed on air operations, 17 May 1942.

During the late afternoon rain and low cloud caused visibility to decrease to only a few hundred yards, making location of the enemy force exceedingly difficult, with the result that in spite of attacks by Bomber Command the warships were able to escape in the gathering darkness of the early February night. The weather throughout the day played an important part in the operation, and it seems certain that the enemy's decision to break up-Channel on 12 February was made in the knowledge that a belt of rain and low cloud was approaching the Channel. The Germans flew regular and extensive meteorological reconnaissances over the [Atlantic](#), and on this occasion their estimation of weather conditions was made with precision and their plans laid with corresponding care.

Three months later the heavy cruiser *Prinz Eugen* was the target for bombing and torpedo attacks by Hudsons and Beauforts in northern waters. In the late afternoon of 16 May the *Prinz Eugen*, accompanied by destroyers, was sighted by a reconnaissance aircraft travelling southwards along the Norwegian coast; and on the assumption that this force would pass Stadlandet at midnight, 14 Beauforts were despatched to that area to find and attack the cruiser. All failed to sight the enemy naval force. Reconnaissance on the following day succeeded in locating the warships farther southwards. The various sightings which were then made justified the conclusion that they would pass the Lister Light in the early evening. Torpedo-carrying Beauforts, with a Beaufighter escort and a diversion of high-flying Hudsons, were therefore despatched to attack. They were successful in finding the ships but, just as the

torpedo-bombers were approaching their target, they were set upon by fighters and three were shot down. Flight Sergeant Keeling, who was flying in one of these aircraft, was lost with his crew. Pilot Officer Wells,¹ navigator in another, survived to become a prisoner of war. Later he told how:

Our Beaufort managed to survive two attacks and had closed the range to one mile when an Me 109 succeeded in putting a full burst into the starboard motor. The pilot began to turn away but found the aircraft out of control. We struck the water fairly hard and by the time the pilot and myself had come to the surface, only the fuselage abaft the rear turret was still afloat. The wireless operator and gunner had escaped from the rear hatch but their combined efforts to release the dinghy were unsuccessful. We remained afloat for twenty minutes by keeping closely together and finally attracted the attention of one of the German destroyers which altered course and hauled us aboard.

Almost every aircraft was engaged by enemy fighters during the run up and there was intense flak from the cruiser and her escorts.

¹ Flight Lieutenant A. R. Wells; [Wellington](#); born Walthamstow, Essex, 15 Oct 1910; ship's purser; joined [RNZAF](#) Oct 1940; p.w. 17 May 1942.

Because of this severe opposition no form of co-ordinated attack was possible; the operation developed into a series of individual efforts and although most pilots succeeded in dropping their torpedoes, only one possible hit was observed. Leading a section of No. 42 Squadron, Dinsdale saw his torpedo run well, then he was set upon by five fighters; only sharp evasive action and the fact that 'they were all endeavouring to attack at once' enabled him to escape. Unfortunately the second force of 15 Beauforts of No. 86 Squadron, owing to an error in the transmission of a signal, failed to find the target. They were attacked by enemy fighters in the vicinity of the Norwegian coast and five were shot down. The failure of this operation to achieve greater success

emphasized the difficulties of attacking enemy naval units which were strongly defended by shore-based fighters. In the case of several Allied warships sunk by enemy aircraft about this time in the [Mediterranean](#) and [Far East](#), none had enjoyed this protection.

Meanwhile, the Hudson crews continued to fly reconnaissance patrols and harass enemy merchant shipping along the Norwegian and North Sea coasts. Single aircraft ranged far and wide along the shipping routes and, on locating a target, would report its speed and position so that a striking force could be despatched to attack. On occasion the reconnaissance aircraft also attacked targets that were less heavily defended. Altogether the work done by the crews of these lone aircraft, in the face of opposition from enemy fighters and shore defences, was of a high order. But too often the Hudsons, intercepted in clear skies by German aircraft of superior performance, failed to return from their patrols. Typically, on 15 July the Hudson flown by Squadron Leader Pederson ¹ disappeared during a long reconnaissance patrol off the Norwegian coast. No message was received from the aircraft and nothing was heard of its fate. Pederson had flown Ansons and Hudsons in the early months of the war and then, after a period of ferrying duties, had returned to [Coastal Command](#) to fly anti-shipping patrols as flight commander in No. 48 Squadron.

The low-level bombing attacks were particularly hazardous. Usually the aircraft flew over the ships at mast height in the face of withering fire from the guns of the escorts and the merchant ships. The relatively slow and large Hudsons were a good mark for the gunners and many were shot down while making their attacks. At the same time the enemy convoys often proved elusive targets, as the ships, on sighting a reconnaissance aircraft, would take avoiding action as soon as it disappeared; they would double back and lie

¹ Squadron Leader V. A. Pederson; born Manunui, 28 Oct 1913; joined RAF Dec 1938; killed on air operations, 15 Jul 1942.

near the coast or else increase speed and change course so that a strike force arriving some hours later failed to locate them. But, by July 1942, the chief difficulty mitigating against successful attack was the considerable improvement in the defensive armament of both the escorts and the merchant ships. There was also a noticeable increase in the number of escort vessels with each convoy, which gave added strength to the anti-aircraft defence.

This stronger protection given his merchant shipping won for the enemy a temporary victory; **Coastal Command** was forced to give up low-level attacks and revert to medium level bombing—a change in tactics which reduced British casualties but also seriously reduced the accuracy of the attacks, since a relatively efficient bomb sight for use in medium level bombing was not yet available. It was clear that to continue the offensive effectively it would be necessary to develop a new form of attack. The stage had also been reached where the Hudson as an anti-shipping aircraft, and indeed, even for reconnaissance purposes in the North Sea, was almost obsolete. Its replacement by the Beaufighter for those duties and also as a torpedo aircraft, which now began, was already overdue. Meanwhile, as a temporary expedient Hampden bombers were employed in anti-shipping operations, but these aircraft were really not suitable for the type of strike warfare that was now envisaged, since their slow speed made it impossible for the faster cannon-firing Beaufighters to achieve co-operation with them in such operations. The only way in which they could be used effectively was in torpedo attacks along the Norwegian coast, where the enemy's convoys were less heavily escorted than off the Dutch coast.

It was with the Hampdens that the New Zealand torpedo-bomber squadron now began patrols and attacks against German shipping along the coast of **Norway**. By the end of July the crews had completed their training on torpedo-bombers and the unit commenced a move to Skitten, a new aerodrome forming a satellite to the long established **Royal Air Force** station at Wick in north-east **Scotland**. Conditions were far from pleasant in this remote corner of **Scotland**, but the men soon settled

down in their new quarters and before long had established friendly relations with the folk in the district, from whom offers of hospitality were soon forthcoming. Within a few days of its arrival, on 11 August, No. 489 Squadron undertook its first mission off the Norwegian coast. This was a search for the German battleship *Lutzow* which had been reported off the southern coast of **Norway**. Flying Officers Richardson, Latta ¹ and

¹ Flying Officer S. Latta; born **Greymouth**, 20 Dec 1916; photographer; joined **RNZAF** Jan 1941; killed on air operations, 9 Apr 1943.



ATTACKS ON GERMAN SEA COMMUNICATIONS

Nilsson, ¹ Warrant Officer Dunn, ² and Sergeant A. H. Jones ³ were among the New Zealanders who made the reconnaissance. The Hampdens patrolled to the north and east of Lister, but visibility was extremely bad and the crews were unable to report any sighting.

¹ Flight Lieutenant D. J. Nilsson; **Napier**; born Waipawa, 15 Jul 1916; farmer; joined **RNZAF** Nov 1940.

² Flight Lieutenant R. C. Dunn; **Christchurch**; born **Kaiapoi**, 28 Aug 1915; clerk; joined **RNZAF** Dec 1940.

³ Warrant Officer A. H. Jones; Dunedin; born Dunedin, 5 Mar 1917; hatter; joined **RNZAF** Nov 1940; p.w. 14 May 1943.

The bomber in which Sergeant G. A. Jones ¹ flew as air gunner was not heard of again after setting out from base. Documents captured with the *Lutzow* reveal that this aircraft was probably successful in locating the enemy warship, although its subsequent fate is uncertain.

In the following weeks the Hampdens searched for enemy shipping along the south-west coast of **Norway** and also flew anti-submarine patrols to the north of **Scotland**. An interesting mission was flown on 21 August by Flying Officer Tidy ² and his crew, who met and escorted the aircraft carrier *Victorious* and the battleship *Rodney* during the last stage of their passage to Scapa Flow. Early September patrols over northern waters were uneventful, but during the third week the squadron suffered its second loss when Flying Officer Murray ³ and his crew failed to return from patrol. A message received from the Hampden nine hours after take-off indicated that it had been battling against head winds, was short of fuel and would have to land in the sea. Intensive air searches during the next few days proved fruitless.

On 17 September No. 489 Squadron's patrols were rewarded by a sighting and attack. An early morning reconnaissance had reported a convoy south of Stavanger and three Hampdens took off to intercept. They were captained by Flying Officer J. J. Richardson, Flying Officer Mottram, ⁴ the English tennis player, and Flight Sergeant Strain, ⁵ a Scot from Prestwick. Course was set in formation for a point off Obersted, but as the torpedo-bombers approached the Norwegian coast a further sighting report was received from a reconnaissance aircraft. They therefore altered course and soon sighted the enemy convoy, which consisted of one vessel of some 5000 tons and a smaller tramp steamer, accompanied by five escorts of the trawler type. The three Hampdens immediately closed to the attack and torpedoes launched by Mottram and Richardson struck the largest ship within a few seconds of each

other. According to one of the rear gunners, 'the sides of the ship appeared to swell between the funnel and the stern and when they could swell no more, they burst. After the explosion, part of the vessel was hidden by a mass of white foam, in which black smoke and bits of the ship itself were mixed.' Meanwhile the torpedo from the third Hampden had run across the bows of this vessel and was last seen heading for the stern of a smaller ship. Enemy fighters now appeared on the

¹ Sergeant G. A. Jones; born Dunedin, 8 Jun 1912; wool worker; joined RNZAF Dec 1940; killed on air operations, 11 Aug 1942.

² Flight Lieutenant W. B. Tidy; Marton; born Wellington, 7 Apr 1918; farmer; joined RNZAF Dec 1940.

³ Flying Officer T. D. G. Murray; born Whangarei, 1 Jun 1913; clerk; joined RNZAF Dec 1940; killed on air operations, 15 Sep 1942.

⁴ Squadron Leader A. J. Mottram, DFC; born Coventry, Warwickshire, 8 Jun 1920; joined RAF Jul 1940.

⁵ Flying Officer J. Strain, DFC, AFC; born Glasgow, 9 Dec 1912; joined RAF Sep 1939.

scene and it was only with difficulty that the Hampdens succeeded in shaking them off and returning safely to base.

A few weeks later, on anti-shipping reconnaissance between Egero and the Naze, Richardson and his New Zealand crew consisting of Flight Sergeants McKenzie ¹ and Hyde ² and Sergeant Gaskill, ³ sighted a transport of some 4000 tons. The ship's gunners opened fire, but Richardson immediately went in to launch his torpedo and it was seen to strike the enemy vessel almost amidships. While turning away after the attack the Hampden was hotly engaged by a Junkers 88, but the

gunners were able to drive it off and the bomber returned to base without further incident.

As winter approached, the crews flying patrols along the Norwegian coast frequently met low cloud, sea fog or storms. Such conditions prevailed on 7 November when five Hampdens took part in an extensive but unsuccessful search for the pocket battleship *Admiral Scheer*, which was believed to be off the south-west coast of **Norway**. Patrols on the 15th, however, proved more fruitful. On that day eleven Hampdens were ordered to search the north-west coast of **Norway** in the neighbourhood of Stadlandet, the point on the Norwegian coast where enemy ships in their southward journey were forced to leave the shelter of the chain of islands along the coast. On reaching their patrol area the formation divided, and shortly afterwards three Hampdens—two of them piloted by Flying Officer Nilsson and Warrant Officer Dunn—sighted a small convoy. The bombers turned in and launched their torpedoes, but unfortunately the first two broke up in the extremely rough sea. Dunn's torpedo was seen to hit the rear vessel in the convoy. A great vertical sheet of spray covered the ship, and when this subsided she was seen to be listing heavily and settling in the water. On the return flight, as so often happened, the tired crews flew through rain and sleet to find considerable haze over their base and landing proved difficult.

Two further successes were achieved by the Hampdens before the end of the year. On a night patrol near Kristiansand, Flying Officer Freshney ⁴ sighted a merchant ship of some 2000 tons silhouetted in the moonlight, and by approaching out of the darkness was able to release his torpedo and get clear before the German gunners could open fire. As the Hampden turned away the rear gunner saw 'a large orange-coloured flash and a shower of sparks'. Pilot Officer

¹ Flight Lieutenant B. A. McKenzie; **Wellington**; born **Featherston**, 23 Mar 1921; clerk; joined **RNZAF** Nov 1940; p.w. 18 Jan 1943.

² Warrant Officer A. A. Hyde; **Rotorua**; born **Rotorua**, 11 Jul 1920; shop assistant joined **RNZAF** Nov 1940; p.w. 18 Jan 1943.

³ Warrant Officer G. A. Gaskill; **Opotiki**; born **Opotiki**, 13 Mar 1915; dairy company employee; joined **RNZAF** Nov 1940; p.w. 18 Jan 1943.

⁴ Flying Officer C. J. Freshney; born Takapuna, 27 Nov 1921; spare parts assistant; joined **RNZAF** Dec 1940; killed on air operations, 4 Apr 1943.

Shallcrass ¹ and his crew used similar tactics in a night attack early in December. Finding a convoy in a narrow channel between steep cliffs and a number of small islands, a low approach was made from behind one of the islands. The torpedo was then launched at the largest ship in the convoy, and the Hampden was weaving its way out among the islands before billowing smoke indicated that the surprise attack had been successful.

Meanwhile, during the second half of 1942, a new and stronger form of air attack was being developed—the ‘wing strike’—in which the New Zealand Squadron was later to play a prominent part. There had already been considerable discussion of the relative merits of torpedo and bombing attacks on enemy shipping, and now on the basis of results achieved both in the **Mediterranean** and in European waters, it was decided that the torpedo attack gave the best promise of successful development at this stage; an anti-shipping strike force should be built up to operate in daylight against the heavily defended convoys such as were now moving along the Dutch coast. It was to be composed of torpedo-carrying aircraft of high speed and manoeuvrability, and fighter aircraft of similar speed and endurance; the latter would provide cover during the torpedo attack by saturating the enemy’s flak defences with cannon fire. The aircrews of this force would be trained and briefed together in order to achieve perfect co-operation. This, together with the

similarity in performance of the fighter and strike aircraft, would then make possible the high degree of synchronisation essential for success.

Because of various delays in obtaining both aircraft and equipment, it was not until the end of October that the first Beaufighter strike wing assembled at North Coates in eastern England. It made its first strike on 20 November 1942, when the force consisted of thirteen Beaufighters of No. 236 Squadron, armed with bombs, nine Beaufighters of No. 254 Squadron, armed with torpedoes, and two other Beaufighters as ordinary fighters. In addition, an escort of twelve Spitfires from Fighter Command was to take part, but these aircraft failed to make contact with the larger formation. The target was an enemy convoy proceeding southwards along the Dutch coast. Unfortunately, bad weather and inexperience produced a lack of co-ordination in attack and only one torpedo hit was claimed. Nevertheless, in spite of the comparative failure of this initial operation, it was maintained that this form of attack was the correct solution to the tactical problem, although it was clear that careful planning, good leadership, and a very high standard of air discipline

¹ Flight Lieutenant F. N. Shallcrass; born [Greymouth](#), 18 Jul 1915; salesman; joined [RNZAF](#) Jan 1940; killed on air operations, 30 Sep 1944.

would be necessary before the aircraft could operate successfully as a strong and composite striking force. Accordingly the squadrons were withdrawn from the line at the end of November for further training.

Among the New Zealanders who flew on this first strike wing operation was Squadron Leader G. D. Sise, who led the formation of torpedo-carrying Beaufighters from No. 254 Squadron. Shortly after making a most determined attack at close range on a large supply ship, the principal vessel in the convoy, his Beaufighter was badly damaged by flak from the escorts. With some difficulty Sise retained control of his machine, and then he was almost immediately attacked by three enemy

fighters. He managed to avoid most of their attacks although his aircraft was again hit. Finally he got his Beaufighter clear and after a difficult flight reached the English coast, where in failing light and poor visibility he made a crash landing on the beach.

By December 1942 the aerial campaign, particularly the minelaying from the air, was beginning to interfere seriously with the enemy's seaborne supplies, and his fear of air attack was now very real. Evidence of this was to be found in stronger forces of minesweepers and flak ships accompanying convoys, and in the greater inducements being offered to the Swedes for the use of their ships. In fact, the large bonuses paid to Swedish crews to sail as far as **Rotterdam** soon led to this route becoming known among them as 'the gold coast'. Although efficient reorganisation of the enemy's shipping resources during the last months of 1942 was, for the time being, to offset the effect of the air attacks, German anxieties in this respect were by no means relieved. In December the newly appointed *Reichkommissar* for shipping was reporting to Hitler:

It has been possible by the utilisation of all available ships to fulfil the supply programme to **Norway**. However, in view of the regularly accruing losses and the continually increasing amounts of cargo which are required by **Norway**, it can under no condition be reckoned that the transport programme in the coming year can be accomplished in the same manner.

He had good reason for his pessimism. With the intensification of Bomber Command's minelaying campaign and the development of torpedo attacks by the strike wings of **Coastal Command**, the next twelve months were to see the denial of the North Sea to German shipping in daylight and the virtual closing of the vital port of **Rotterdam**.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 16 – DAY FIGHTERS DURING 1942

CHAPTER 16

Day Fighters During 1942

THE third winter of war found the **Luftwaffe** involved in operations on three fronts, in **Russia**, the **Mediterranean** and in Western Europe, and this was already causing some anxiety in the **German High Command**. However, the enemy hoped for an early successful conclusion to the military operations on his Eastern Front and in the **Middle East**, which would then enable him to turn his full might upon the **British Isles**. Meanwhile he was content to conduct a holding campaign in the West so that the main strength of the **Luftwaffe** could be deployed in support of the German Army in **Russia** and in the **Mediterranean**, where the air assault on the island of **Malta** had already begun.

In this situation the role of Royal Air Force Fighter Command in **Britain** was to pin down and destroy in the West as large a part of the German air strength as possible, by a continuation of the offensive sweeps and circus operations with bombers over northern **France**. The Germans were astute enough to counter this strategy with small but widespread raids on British shipping and coastal targets which kept a considerable force on defensive patrols, but they were unable to prevent the development of a vigorous air offensive by **RAF** fighter wings from south-east England. At its peak, from March to the end of June, no fewer than 22,000 sorties, an average of 180 a day, were flown across the Channel.

Throughout 1942 there was to be a steady movement of British pilots and machines to the **Middle East**, with the result that the fighter force available in the **United Kingdom** for day operations against the **Luftwaffe** remained static at about eighty squadrons. During the second half of the year, when the loss of experienced leaders and fighter pilots was being keenly felt, Fighter Command was to be strengthened by the introduction of the Spitfire IX and the Hawker Typhoon. The Typhoon, designed primarily as a bomber interceptor at medium altitudes, was to prove as versatile a machine as its forerunner, the Hurricane, and with

its superior speed and armament was to be very effective in interceptions of the enemy's fast 'tip and run' raiders over southern England. The advent of the new type of Spitfire was particularly welcome for the contemporary Spitfire VB was badly outclassed by the new German fighter, the Focke-Wulf 190. It was partly because of this disadvantage that the balance of casualties over the whole year favoured the enemy by almost two to one, more than was actually thought at the time. Nevertheless it is significant that during 1942 the enemy's output of Focke-Wulf fighters was devoted exclusively to meeting the **RAF** attacks, and units which might otherwise have been used to reinforce the Eastern Front were kept at full stretch in Western Europe.

New Zealand representation in Fighter Command during 1942 included two commanders of day-fighter bases—Wing Commander J. S. McLean, who had led the **North Weald Wing** during the previous year and was now in charge of RAF Station, Hunsdon, and Wing Commander H. N. G. Isherwood, who took command of RAF Station, Church Stanton, in January. Wing Commanders P. G. Jameson, M. V. Blake, and E. P. Wells were also to lead fighter wings during the year. Jameson continued to command the No. 12 Group wing based at Wittering and Blake to command the Portreath Wing in No. 10 Group, while Wells who led the New Zealand Spitfire Squadron during the early months, was appointed to command the **Kenley Wing** of No. 11 Group in May 1942. All three men were to win distinction as wing leaders. Six day-fighter squadrons were commanded by New Zealanders for various periods during the year. Squadron Leaders A. C. Deere and C. F. Gray both led Spitfires from the famous fighter airfield at Hornchurch, Essex, while Squadron Leader N. J. Mowat led Hurri-bombers from Manston in Kent. Spitfire squadrons at other airfields in southern England were commanded by Squadron Leaders D. Carlson, J. R. C. Kilian, ¹ C. E. Malfroy and R. D. Yule. In addition some thirty New Zealanders held positions as flight commanders in squadrons and a small group served in administrative and maintenance duties. Five New Zealand doctors were medical officers in Fighter Command during 1942.

In this year two of the New Zealand units formed in the Royal **Air Force** were to play a prominent part in day fighter operations. No. 485 Spitfire Squadron, now well established at a forward airfield in No. 11 Group, was to enjoy a particularly successful period, and under the leadership first of Squadron Leader Wells and then of Squadron Leader R. J. C. Grant, who took command in May, operations were conducted with spirit and dash. The squadron continued to fly offensive patrols over northern **France** as part of the **Kenley Wing** until July 1942, when it was transferred to Wittering airfield near **Peterborough**, the base of Jameson's wing. Then after a short rest period, during which convoy patrols were

¹ Squadron Leader J. R. C. Kilian, Croix de Guerre (Fr); Queenstown; born 23 Jun 1911; joined **RNZAF** Sep 1937; commanded No. 122 Sqdn, 1942; No. 504 Sqdn, 1943.

flown along the East Coast, No. 485 Squadron returned to the offensive; apart from a break of a fortnight in October, when the Spitfires went to Northern Ireland to cover convoys leaving the Clyde to make the historic landings in North Africa, offensive patrols across the Channel were sustained until the end of the year.

No. 486 Squadron, the second New Zealand squadron in Fighter Command, began forming at Kirton-in-Lindsey, Lincolnshire, on 3 March 1942, and was equipped with Hurricane aircraft for night fighting. The first commanding officer was Squadron Leader Roberts,¹ an experienced English pilot who had fought in the Battle of **France**. His two flight commanders were Flight Lieutenants J. G. Clouston and H. N. Sweetman. Clouston had begun his operational flying at the end of 1940 in No. 258 Hurricane Squadron, which was then commanded by his brother, Squadron Leader W. G. Clouston. He afterwards flew Spitfires before joining the New Zealand unit. Sweetman had flown with No. 485 Squadron from its formation and had already won distinction as a fighter pilot. By the end of the month the new squadron had its full complement of 24 pilots, all of whom were New Zealanders, and flying

training was begun. This involved practice flights in company with Bostons fitted with searchlights, the idea being that the **Boston** should locate German raiders, catch them in the searchlight beam and so enable the Hurricanes to come in for the kill. But although in theory this method of night fighting appeared attractive, it did not prove as successful in practice as had been expected.

The monotony of night training was relieved by occasional patrols protecting shipping, and No. 486's first operational mission on 27 April was of this kind, when Sweetman and Pilot Officer Umbers² flew a dawn patrol. From the end of May the squadron maintained night readiness, but there was little enemy activity and the following weeks were uneventful. It was not until early in July that the first action occurred, Sweetman intercepting a Dornier while on patrol near **Peterborough**. It was just after midnight when, in clear moonlight, he sighted the enemy bomber slightly below him and silhouetted against some broken cloud. The German gunners must have seen the Hurricane almost at the same time for they opened fire as it approached. Sweetman closed in, however, and after a few bursts the Dornier turned over and went down to explode on the ground. Unfortunately there was no opportunity to repeat this

¹ Wing Commander C. L. C. Roberts; **RAF**; born Forest Hill, **London**, 22 Aug 1916; joined **RAF** 1935; CFI, No. 57 OTU, 1941–42; commanded No. 486 (NZ) Sqdn, 1942–43; No. 257 Sqdn, 1943; Sector Commander, HQ Middle East, 1944; commanded No. 26 AACU, 1944–45.

² Squadron Leader A. E. Umbers, DFC and bar; born Dunedin, 30 Jun 1919; clerk; joined **RNZAF** Nov 1940; commanded No. 486 (NZ) Sqdn, 1944–45; killed on air operations, 14 Feb 1945.

success, for a decision had already been made to change the squadron's role and equip it with Typhoon aircraft for day fighting. Conversion to the new type began a few weeks later, and at the end of August the squadron moved south to begin patrols along the Channel

coast against low-level raids by German fighter-bombers, operations in which the Typhoons were to achieve particular success.

Among the pilots who flew with the fighter squadrons during 1942 were many young men who had newly arrived in **Britain** on completing their training under the Commonwealth training scheme. For these youngsters their posting to an operational squadron was the culmination of a long period of anticipation and restless yearning. Inspired by the exploits of the fighter pilots in the Battle of **Britain**, they had applied to join the **RNZAF**' to fly Spitfires'. Enlistment had been followed by months of training and intensive study at an initial training wing, where lectures were interspersed with physical training and what was familiarly known as 'square bashing'. Then came a course of several months at a flying training school, successful completion of which brought the coveted pilot's wings. After completing further training in New Zealand or **Canada**, the pilot went to one of the operational training centres in **Britain** to master the handling of fighter aircraft in use by the front-line units. Eventually he reached his first squadron, but even then there was much still to be learnt about current fighter tactics, and it was in this respect that the more experienced pilots were able to supply what youthful enthusiasm and inexperience lacked.

Unusually severe weather and heavy falls of snow restricted flying during the first two months of 1942, but there was considerable activity on 12 February when the German warships made their spectacular dash up-Channel from **Brest**. No. 485 Squadron took a leading part in the air fighting on that day, and reported the destruction of four enemy machines without loss. Following the sighting of the enemy fleet, the **Kenley Wing** was detailed to escort torpedo-bombers to launch attacks, but in the cloudy skies of the grey February afternoon the fighters did not find the bombers and were ordered to fly on to the target themselves. The New Zealand Squadron, in which flights were led by Squadron Leader Wells and Flight Lieutenants W. V. Crawford-Compton and G. H. Francis, encountered enemy fighters near the Belgian coast, and in a brief engagement Compton's flight destroyed two

Messerschmitts. One was shot down by Pilot Officers Sweetman and D. T. Clouston ¹ as it attempted to make a stern attack on their leader; Compton then

¹ Flight Lieutenant D. T. Clouston; Dunedin; born **Auckland**, 26 Jul 1918; school-master; joined **RNZAF** Nov 1940.

attacked another and saw it crash on the beach a few miles west of Ostend. Meanwhile the other two flights had reached the vicinity of the enemy warships. They could see the *Scharnhorst*, *Prinz Eugen* and the *Gneisenau* steaming at full speed, screened on either side by destroyers. Outside the destroyers were screens of E-boats, the distance between the two E-boat screens being about five miles. Wells took his flight down a lane between the battleships and the destroyers and, after failing to meet fighters, made an attack on one of the smaller escort vessels and left it sinking. The remaining flight was led by Francis along the lane on the other side of the battleships. Here they met both Messerschmitts and Focke-Wulf 190s; in the mêlée which followed, Francis drove a Focke-Wulf down with smoke pouring from its engine, Pilot Officer Grant sent one Messerschmitt crashing into the sea, and Flight Sergeant J. D. Rae blew off the hood and shattered the tail unit of another before he was forced to break away. New Zealanders also flew with the Spitfire squadrons detailed to escort aircraft from Bomber Command, and with the Hurricane units which made cannon and bombing attacks. In the face of fierce opposition Squadron Leader Mowat led eight Hurri-bombers in an attack against the escort vessels. After Mowat had scored two direct hits on one of these ships it was seen to break in half and sink. In another typical attack Flight Lieutenant Raymond ¹ led six Hurricanes from No. 1 Squadron, each pair of Hurricanes being protected by four Spitfires which flew above and behind them. Flying through broken cloud, the formation eventually sighted enemy ships and Raymond led the Hurricanes in to attack; many strikes were seen as the pilots raked the sides, decks, and superstructures with cannon fire but two Hurricanes were shot down. Altogether during the day's operations over

the Channel, Fighter Command claimed the destruction of 15 enemy machines for the loss of 16 British pilots.

In March 1942 the **Royal Air Force** offensive over northern **France** was renewed in strength. Among the many missions flown during the next few months, the most important were the circus operations in which bombers were escorted to attack important objectives with the intention of inducing German fighters to accept combat with Fighter Command's covering forces. The targets attacked included power stations, chemical works, steel mills, airfields and aircraft factories. Other missions included sweeps over the enemy coast and attacks on ports and shipping in the Channel.

¹ Flight Lieutenant W. Raymond; **Auckland**; born **Christchurch**, 9 Feb 1919; clerk; joined **RNZAF** Sep 1939; transferred **RAF** Apr 1940; retransferred **RNZAF** Apr 1945.

For the fighter squadrons these operations followed a fairly similar pattern. The early morning hours at the forward airfields would see the pilots gathered near their aircraft at the dispersal points. Some men might already be on dawn patrol or at readiness. The flights of the squadrons usually had separate dispersal huts a few hundred yards apart, an arrangement which avoided concentration of fighter aircraft and incidentally encouraged a corporate spirit and a healthy rivalry. The pilots were detailed for operations by their respective flight commanders and, until news of an impending operation was received, the men continued training or discussed tactics. Soon a telephone call might bring orders for an immediate patrol or warning of briefing for a large-scale operation a few hours later. The briefing was usually conducted by the wing leader, who explained in detail the forces that would be employed, their various roles, particularly that of his own squadrons, the target, rendezvous point, the heights at which squadrons would fly and any information peculiar to the mission. The period between briefing and take-off was always trying, even for the experienced pilots. Conversation tended to take on an enforced light-heartedness, many

cigarettes were smoked and many short visits made as the time for take-off approached. Eventually the pilots went out to their aircraft, had a final look round and climbed into their cockpits. Straps were tightened, helmets buttoned, masks adjusted, and with a whine and then a roar which shattered the stillness the squadron commander's engine started up. Soon the fighters were taxi-ing slowly out into the wind. Where the surface was good the Spitfires took off in flights, or even as a complete squadron spread right across the airfield. It was an inspiring moment, and even old and hardened hands were impelled to pause and watch the sleek machines as they swept across the field, to lift gently off the ground and then tuck their wheels neatly into place before soaring off into the sky. For the first few minutes after take-off each pilot was busy adjusting engine revolutions and boost, checking oxygen and instruments and trimming the aircraft. Then climbing formation—three in line astern—would be adopted. By this time a wide circuit of the airfield had been made, other squadrons of the wing would be in contact, and the whole formation would set course on the climb for the rendezvous. Soon the bombers would be sighted and the fighter squadrons would take up their positions, some close in, others above and below. The whole force would then set course for the target. Ahead and out of sight of this main stream, other squadrons would be creating a diversion, while behind others would be taking off and joining up preparatory to providing withdrawal cover for the main force on its way home. As the aircraft flew in over the French coast, radio messages would warn the wing leaders of enemy fighters which had been plotted by British radar stations. Then the whole fighter formation, unless split up by determined enemy opposition, made a wide sweep round the landward side of the target while the bombers dropped their loads and flew out again, fighter squadrons rearranging themselves so as to protect the bombers and each other from attack out of the sun. As the Channel coast was reached, the withdrawal of the bombers would be covered by some of the escorting fighters sweeping back or by the arrival of squadrons specially detailed for this purpose. Frequently the main attack met only slight opposition and, apart from the black puffs of bursting

anti-aircraft shells, the fighter pilots would see little sign of enemy activity. Diversionary sweeps had drawn off the German fighters or else, finding themselves at a tactical disadvantage in height and position, they had refused combat.

A circus operation, typical of many in which New Zealanders took part, was flown on the afternoon of 13 March when **Boston** bombers, covered by 14 squadrons of fighters drawn from five wings, attacked the marshalling yards at Hazebrouck. The Kenley Wing, which included the New Zealand Spitfire Squadron, reached the target just before the bombers and while sweeping the area saw the Bostons attack. There were bursts amongst the railway sidings and on the main line, and a large building was set on fire. The New Zealand Spitfires met no enemy aircraft despite the fact that, on reaching the English coast on the return journey, they swept back over the Channel. No. 452 Australian Squadron had only a slight brush with the enemy in which one Focke-Wulf was shot down without loss, but No. 602 Squadron became involved with Messerschmitts and Focke-Wulfs soon after leaving the target and claimed four of them for the loss of one pilot.

The **Biggin Hill Wing**, which also gave forward cover, flew in over the airfield at St. Omer, and as the Spitfires approached the target area they met two small formations of Focke-Wulfs. Diving on the enemy, they were able to destroy two of them and damage another but three of the Spitfires were later shot down. The wing had then become split up and the leader ordered pilots to return to base. Meanwhile the Northolt and Hornchurch Wings had made a rendezvous with the bombers over Gravesend, and the formation crossed the Channel and flew in between Gravelines and Calais. This force reached the target without incident, but on the way back to the French coast 20 Messerschmitts attacked and in the dogfights which followed three enemy machines were claimed for the loss of one Spitfire. The bombers suffered no loss and were safely escorted back across the Channel after being met at Calais by the **Tangmere Wing**, which had swept along the French coast from Cap Gris Nez.

But not all missions were on quite such a large scale; for example, on 26 March, when **Bostons** attacked ships and docks at Le Havre, the fighter escort consisted of six squadrons of Spitfires. No. 485 Squadron, led by Crawford-Compton, flew as part of the Kenley Wing which gave top cover. Some five miles short of the target, the wing met a strong formation of Messerschmitts and a running battle continued until the French coast was left behind. Several New Zealand pilots were able to report successful combats. Compton sent one Messerschmitt crashing into the sea just off Le Havre. He then dived on the tail of another which was making a head-on attack against Pilot Officer Mackie,¹ who afterwards told how: 'It was firing everything at me as it came head on. I went straight for it, head on, firing all machine guns and cannon guns and just missed colliding as we came together, by pulling up above it.' Compton was able to follow the Messerschmitt as it broke away and sent it spinning down near Fecamp. Meanwhile Sergeant Maskill,² after evading stern attacks from two Messerschmitts, had sent a third down in flames. He was again attacked, his Spitfire being hit in the engine and one wing, but he reached England safely. Altogether, British pilots claimed six of the enemy, but two Spitfires and two bombers failed to return. In the bombing attacks the **Boston** crews reported direct hits on a ship in dock and on a nearby warehouse, other bombs being seen to burst on the dock entrance.

New Zealanders were again in action two days later when eight fighter squadrons swept the Channel from Cap Gris Nez to **Dunkirk**. The German fighter force in northern **France** reacted in strength and some of the heaviest air fighting of the month followed, all the British squadrons reporting fierce engagements with Focke-Wulfs and Messerschmitts. On this occasion the eleven Spitfires from No. 485 Squadron were led by the distinguished British pilot, Group Captain Beamish,³ who commanded **RAF** Station, Kenley. As they made landfall near Cap Griz Nez they sighted some forty enemy fighters, mostly Focke-Wulf 190s, about to dive on another wing. Beamish immediately led the Kenley

¹ Wing Commander E. D. Mackie, DSO, DFC and bar, DFC (US); **Otorohanga**; born **Waihi**, 31 Oct 1917; electrician; joined **RNZAF** Jan 1941; commanded No. 92 Sqdn, **Middle East**, 1943–44; commanded No. 80 Sqdn and Wing Leader, No. 122 Wing, 1945.

² Squadron Leader I. P. J. Maskill, DFC; England; born Alexandra, 21 May 1920; linesman; joined **RNZAF** Jan 1941; commanded No. 91 Sqdn, 1945.

³ Group Captain F. V. Beamish, DSO, DFC, AFC; born Dunmanway, County Cork, 27 Sep 1903; Cranwell Cadet; permanent commission **RAF** 1923; commanded **RAF** Stations, North Weald, 1940–41, Debden, 1941 and Kenley, 1942; killed on air operations, 28 Mar 1942.

squadrons to intercept and, as the Spitfires dived to attack, formations became split up. Beamish, together with Flight Lieutenant Grant and Flight Sergeant Liken, ¹ flew towards two enemy aircraft but these immediately dived away and were lost. Beamish was then attacked in quick succession by two Focke-Wulf 190s. Grant, who was flying close behind him, was able to drive off the first assailant and pour a stream of bullets into the second, which blew up in mid-air. Unfortunately the leader's Spitfire had already been badly hit and was last seen flying low over the French coast. Group Captain Beamish—a gallant and popular leader—failed to return. Meanwhile other members of the squadron had been in combat. Crawford-Compton led his section against a group of Focke-Wulf 190s and shot down one of them, while in other engagements Liken and Pilot Officer Palmer ² each damaged enemy machines. Flight Lieutenant North, ³ flying with the Australian Spitfire Squadron in the **Kenley Wing**, attacked and drove down a Focke-Wulf which he saw on the tail of one of his fellow pilots.

The March offensive on the whole drew substantial reaction from the **Luftwaffe** units in northern **France**, but it appeared that the German pilots particularly those flying the Focke-Wulf, did not seem settled in

their tactics or confident of their relatively new machines. Yet their interceptions had not been without success as, for example, in the circus operation of the afternoon of 24 March when they shot down nine Spitfires for the loss of only two Focke-Wulfs. In April, however, the German pilots showed an increasing willingness to give battle and displayed a growing consciousness of the superiority of the Focke-Wulf 190 in combat with the Spitfire VB, and the balance swung more in favour of the enemy. Fighter Command suffered a serious reverse on 12 April when escorting Bostons to attack the railway marshalling yards near **Amiens**. Focke-Wulf 190s were up in full strength to intercept the British force; eleven Spitfires and one of the Bostons were shot down and British pilots were able to claim only two of the enemy. Nevertheless, April was a month of intensive and varied activity by Fighter Command, no fewer than 60 large-scale missions being flown. On one day, targets were attacked on a 400-mile front from Brittany to Flushing. After making two sweeps and taking Hurricane bombers to attack ships off the Brittany coast, Spitfires escorted Bostons to bomb the docks at Le Havre and Flushing, an aerodrome at Morlaix, and the marshalling yards at Abbeville.

¹ Flight Sergeant J. R. Liken; born **Oamaru**, 25 Nov 1913; farm manager; joined **RNZAF** Nov 1940; died of wounds received on operations, 26 Apr 1942.

² Flight Lieutenant J. J. Palmer; Havelock North; born **Napier**, 4 Jul 1918; farmer; joined **RNZAF** Nov 1940; p.w. 27 Apr 1942.

³ Flight Lieutenant H. L. North, DFC; born Dunedin, 31 Oct 1919; joined RAF Jan 1939; killed on air operations, 1 May 1942.

Spitfires from the New Zealand Squadron were airborne on 26 of the major attacks during the month, and on a typical sweep on the evening of 24 April they had a very successful encounter with Focke-Wulfs over the French coast in which Squadron Leader Wells, who was leading the

Kenley Wing, Flight Lieutenants Crawford-Compton and Kilian, and Pilot Officer Palmer each reported successful combats. 'We were flying at 18,000 feet just inside the French coast,' Wells afterwards reported, 'when we saw the Focke-Wulfs coming up towards us from Abbeville. We turned out of the sun and took them by surprise. Opened fire and saw my target turn slowly in a haphazard way and go down in a spiral. It crashed in a ploughed field and disappeared in a mass of flames.' Compton's target also went spinning down in flames. Kilian saw cannon shells burst in the fuselage and wing of the machine he had attacked, while flames and smoke burst from the enemy machine at which Palmer fired.

The events of 26 April, when three large-scale operations were flown by Fighter Command, are of particular interest. Shortly before midday 18 squadrons of fighters, including the New Zealand Spitfire Squadron, escorted Bostons to attack the railway station at St. Omer. No. 485 Squadron's pilots did not see action, but several of the other squadrons became involved with Focke-Wulfs and two of the enemy were shot down. When 17 squadrons of Spitfires swept over northern **France** in the early afternoon they met little opposition, but a few hours later, when Hurri-bombers were escorted to attack the Calais area, the enemy reacted in strength. About ten miles inside the French coast a large formation of Focke-Wulfs intercepted the **Kenley Wing**; No. 485 Squadron, flying as top cover, bore the brunt of the attack. The German fighters came through a thin layer of cloud out of the sun in several groups, and the New Zealanders became split up and separated from the other squadrons of their wing. There was some hard fighting in which the enemy pressed home advantages of height and position. In a sudden attack, Flying Officer Pattison's ¹ engine was hit and the cockpit became filled with smoke, but he was able to glide across the Channel and bale out near Dungeness, to be picked up uninjured from his dinghy about an hour and a half later. Flight Sergeant Liken was less fortunate. Wounded in combat and with his machine badly damaged, he was forced to bale out near the English coast, and although he was picked up almost immediately by a rescue launch, he died the same night. Flight Sergeant Goodlet ² was shot down over **France** and was taken prisoner.

¹ Squadron Leader J. G. Pattison, DSO, DFC; Waipawa; born Waipawa, 27 Jan 1917; farmer; joined **RNZAF** Oct 1939; commanded No. 485 (NZ) Sqdn, 1944–45.

² Warrant Officer T. C. Goodlet; Palmerston South; born Dunedin, 7 Feb 1921; clerk; joined **RNZAF** Sep 1940; p.w. 26 Apr 1942.

Leader Wells and Pilot Officer Ralph ¹ became separated from the squadron and were repeatedly attacked. Wells got clear, but Ralph's Spitfire was hit in five different places by cannon shells before he was able to spin down and escape. The only successful combat was reported by Pilot Officer Mackie:

We were attacked by Focke-Wulf 190s from all angles. I fired at one but it dived away and I did not see the effect of my fire. Then a stream of tracers passed just under my port wing so I pulled up sharply and turned to see another Focke-Wulf approaching. Gave it a long burst and saw it give out a cloud of black smoke as it went down. Closed in again to give several more bursts and could see liquid streaming from the starboard wing but my windscreen fogged up as I pulled out of the dive. Anti-aircraft gunners scored a direct hit in my main plane as I flew out over the coast.

Among the New Zealand pilots flying with other squadrons at this time Pilot Officer Stenborg ² won particular distinction by shooting down four enemy aircraft within five days. His first success came on the morning of 26 April when his No. 111 Squadron was supporting the attack on St. Omer. Stenborg saw a Focke-Wulf about to attack another Spitfire. He opened fire at long range, then closed in to finish off his victim and saw it hit the ground and burst into flames. The next day he avenged the loss of a fellow pilot by shooting down the Focke-Wulf which had attacked him. Two days later he scored a double success

when, after one combat, he saw the Focke-Wulf hit the ground and, after the other, the German pilot baled out. This determined pilot went to **Malta** in the following month, where he scored further successes. Another to win distinction at this time was Flight Lieutenant H. L. North, who was now a flight commander with the Australian Squadron in the **Kenley Wing**. After serving with No. 43 Squadron from the outbreak of war, North had joined the Australian unit on its formation and 'had on several occasions led the squadron with great dash, courage and initiative'. Already credited with the destruction of five enemy aircraft, he was shot down on 1 May 1942 while leading the Australians in an attack against St. Omer.

By May the Germans had re-equipped a large part of their fighter force in the West with Focke-Wulf 190s and they had considerably improved their warning and control systems. The enemy pilots also fought more confidently. Whereas previously their formations had suffered from lack of information and accurate direction, they were now often able to intercept the British raids

¹ Flight Lieutenant L. M. Ralph, DFC; **Hamilton**; born **Auckland**, 16 Jul 1919; clerk; joined **RNZAF** Jul 1940.

² Flight Lieutenant G. Stenborg, DFC; born **Auckland**, 13 Oct 1921; joined **RNZAF** Jul 1940; killed on air operations, 24 Sep 1943.

before they reached their objectives; during one period of four weeks, 93 Spitfires were shot down at a cost of less than half this number of German fighters. In an effort to avoid detection by the German coastal radar stations, Fighter Command adopted new tactics of approach. Instead of squadrons assembling over southern England at about 5000 feet and then climbing steadily so as to cross the French coast at bombing height, they now met at the lowest possible level, crossed the Channel just above the sea and then, on reaching the French coast, began to climb quickly. This had the effect of considerably delaying the

warning received by the German squadrons, and fighters from the forward airfields were caught at a height disadvantage. However, no large air battles ensued, for the Germans usually refused combat when caught at such a disadvantage. Moreover, they soon adapted their methods of interception to meet the new British tactics. German fighters were withdrawn from most of the forward airfields in northern France and, instead of climbing out in an attempt to intercept the British formations as they crossed the coast, the enemy squadrons, shielded by their coastal warning system, were content to gain height in their back areas and then move to a superior tactical position up-sun and at heights from which they could make favourable interceptions. Thus a situation developed in which it was possible for the Royal Air Force to attack coastal targets with relative impunity, but any attempt to penetrate far inland met stiff opposition, the British formations being frequently at a disadvantage in these battles. It was, in a way, the reverse of the conditions which had obtained during the Battle of Britain.

In one sweep inland towards the end of May, the British squadrons lost six Spitfires when enemy fighters intercepted in strength. The Kenley Wing had just reached Abbeville and turned south when 'at least 30 Focke-Wulfs dived to attack and dog fights continued until the Spitfires crossed the coast at Dieppe.' Two Spitfires from the New Zealand Squadron were shot down and a third damaged in the withdrawal, during which 'the enemy fighters dived from 1000 to 2000 feet above continuously until the coast was reached'. A few days later, when Spitfires from the Hornchurch and North Weald Wings swept between St. Omer and Le Touquet, they were intercepted on the way out and seven Spitfires were shot down. Deere's No. 403 Canadian Squadron fought against heavy odds and suffered severely. Deere was leading the squadron as rear cover in the North Weald Wing, and on the way out over Le Touquet they were attacked from above by some fifteen Focke-Wulfs. Just as Deere turned his Spitfires to meet this attack, two more enemy formations came upon them and in the running fight that followed the squadron lost six Spitfires. Deere himself was heavily

attacked from all sides and exhausted all his ammunition, but 'being continuously engaged there was no time to observe results'. However, he later saw two aircraft hit the sea just off the French coast and a Spitfire break in half in mid-air as the pilot baled out. He was then chased to mid-Channel by a Focke-Wulf which, without ammunition, he could not engage. After this enemy machine broke away, Deere saw another pilot bale out so he circled the area until rescue boats approached. Near the English coast he saw another pilot in his dinghy and was able to direct two rescue launches to pick him up. One of Deere's pilots afterwards reported:

I was attacked at the same time as Squadron Leader Deere; saw a Focke-Wulf come up dead in front of me and gave him a short burst as he climbed past; he stall-turned over on his back and spun away. Thought I had him until later saw another do the same manoeuvre. Got on the tail of another Focke-Wulf and opened fire with machine gun only as cannons had both jammed but was almost at once attacked by other enemy machines. In twisting and turning to evade them, found myself at one stage upside down and hanging on my straps. On righting myself I was below 3000 feet and heading for **France** instead of home. Passed over many small villages all of which seemed to have A.A. batteries that opened fire on me. Eventually got on the right bearing for home and saw an enemy fighter crash into the sea on the way out.

In the face of the more determined and skilful German opposition, it was not possible for Fighter Command to continue the sweeps and circus operations on an intensive scale without suffering heavy losses, but at the same time the enemy could not be allowed to retain the initiative. Therefore, from July onwards, in an effort to confuse and scatter the enemy defences, small but more widespread attacks were launched, low-level raids on airfields, railways, and industrial objectives being interspersed with sweeps and circuses flown at greater heights. In addition, attacks on coastal targets were continued.

The attacks on ports and shipping had already produced good results. Squadron Leader Malfroy had led his No. 66 Squadron in a typical

mission on 15 May against a convoy off the Brittany coast. Malfroy led the attack from sea level and his Spitfires raked the ships with cannon fire. Hurri-bombers from No. 175 Squadron then followed them in and one ship burst into flames, two direct hits being seen amidships on another vessel which blew up and sank almost immediately. Then, one day towards the end of June, Spitfires from North Weald sighted and attacked three minesweepers off the Belgian coast. Strikes from cannon shells were seen on all three ships and one of them made for the shore and beached itself; a second vessel caught fire. Just after they had completed their attack, the Spitfires were intercepted by a formation of some twenty Focke-Wulfs, and in the ensuing air battle four enemy machines were claimed for the loss of three Spitfires. Flight Lieutenant Kilian, who was leading Spitfires from No. 222 Squadron this day, was able to report a successful engagement:

I got on the tail of a Focke-Wulf 190 and managed to get in two short bursts before having to take evasive action myself. I then lost sight of my target for a few seconds but when I next saw it, it was gliding towards the sea. It went on down and crashed about 100 yards from another Focke-Wulf 190 which had gone down a few seconds before.

The Hurri-bombers continued to have success in their attacks on ships as well as in low-level raids on land targets. In one attack on a small convoy off the Brittany coast towards the end of July, a small merchant ship was set on fire and cannon strikes were reported on another and on two of the escorts. A few days later, in the same area, a convoy of five merchant ships and a tanker was attacked. After the bombing Pilot Officer Peters ¹ and fellow pilots from No. 175 Squadron saw one merchant ship sinking, another damaged, and the tanker on fire.

The low-level raids on land targets, together with the sweeps and circus operations during July and August, drew varying reactions from the enemy. On occasion squadrons and smaller formations were able to sweep over northern **France** and complete their missions without

interference. At other times, however, heavy fighting took place. On the afternoon of 26 July, when Spitfires from the Biggin Hill, Tangmere and Northolt Wings swept over the enemy airfields at St. Omer and Abbeville, they encountered strong resistance, but fighting under more favourable conditions of height and position, the British pilots were able to claim nine of the enemy for the loss of three Spitfires. Four days later when Hurricane-bombers were escorted to St. Omer by the Northolt, Debden and North Weald Wings, the British force was heavily engaged by large numbers of Focke-Wulfs from the time they crossed the coast. Dogfights continued during the return flight as far as mid-Channel, and altogether eight Spitfires and three Hurricanes were shot down. Five German fighters were reported destroyed. Squadron Leader Carlson, who led No. 154 Squadron Spitfires from Hornchurch as close escort to the bombers, shared in the destruction of one of several Focke-Wulfs which attempted to attack the bombers near the target. The enemy machine caught fire and the pilot baled out. Flight Lieutenant L. P. Griffith led a section of Spitfires from No. 122 Squadron, also from Hornchurch. They were heavily engaged while flying over **France**. In the early stages Griffith sent one Focke-Wulf down on fire, but his squadron soon became split

¹ Flying Officer R. A. Peters, DFM; born **Wanganui**, 16 May 1920; machinist; joined **RNZAF** Nov 1940; killed on air operations, 30 Dec 1943.

up and fared badly, four pilots, one of whom was Sergeant McPherson, ¹ being shot down. The circumstances in which McPherson was lost were particularly unfortunate. While engaged in the running battle over the coast, he saw a fellow pilot struggling in the sea without his dinghy. McPherson went down and threw out his own dinghy as near the spot as possible. He had scarcely done so when he was attacked and his Spitfire was seen to crash into the sea.

Altogether the summer months saw continual and varied activity by the front-line units in southern England. Many squadrons with which New Zealanders were flying now combined coastal convoy patrols,

shipping searches, and attacks with escort duties to bombers and sweeps over northern **France**. Pilots might fly on several different types of operation in one day. As one squadron diary records:

We have been very busy making sweeps, attacking ships and rushing off into enemy territory shooting up all and sundry, and almost always shooting up coastal targets and ships on the way back. In one month the squadron also took part in sixteen large operations over enemy territory.

While much of the air fighting occurred in the large operations, the smaller missions also produced their share of incident. On one occasion, while leading his Spitfires over the Cherbourg area, Squadron Leader Yule was in combat with two Focke-Wulfs; one exploded in mid-air and crashed in the sea, and the second was last seen flying inland with smoke pouring from its engine. In the middle of June two pilots from the New Zealand Spitfire Squadron, Pilot Officers Mackie and **Hume**,² had an eventful flight when, in a typical small operation, they were detailed to attack rail targets at Etaples. Flying in low over the French coast, they followed the railway running northwards towards their objective. Just south of Etaples, Mackie sighted and attacked a railway engine and saw it blow up in a cloud of smoke and steam. Farther north, **Hume** scored hits on a goods train and Mackie shot up another locomotive. Both Spitfires were hit by flak during their flight but returned safely.

The heaviest air fighting of the year took place on 19 August when Fighter Command supported the raid on Dieppe. This landing was a combined reconnaissance in force aimed at obtaining the information and experience necessary before landing operations in **Europe** on a much larger scale could be attempted. The actual landing was made by units of the Canadian and British armies, the

¹ Sergeant A. M. McPherson; born Roxburgh, 5 Feb 1917; labourer; joined **RNZAF** Mar 1941; killed on air operations, 30 Jul 1942.

² Squadron Leader M. R. D. Hume, DFC; **Featherston**; born Martinborough, 27 Oct 1915; farmer; joined **RNZAF** Dec 1940; commanded No. 485 (NZ) Sqdn, 1943–44.

Canadians supplying five-sixths of the assault force, which was carried to and from the French coast by units of the **Royal Navy**. In the few hours the troops were ashore they met fierce resistance and suffered heavy casualties. Of the 6000 men engaged, a total of 3650 were killed, wounded or missing. This savage clash indicated the conditions which might be met in a large assault on a strongly held Channel port, and served as a timely warning to those who were, at this time, strenuously urging the opening of a 'Second Front'.

The tasks of the British air squadrons under Air Vice-Marshal Leigh-Mallory ¹ included the covering of the approach and withdrawal of the ships as well as the assault itself. In addition to bombing shore batteries, shooting up strongpoints on the seafront at Dieppe and laying smoke screens, a constant air umbrella was maintained above the battle area. Squadrons were controlled from No. 11 Group operations room, where Leigh-Mallory could follow every stage of the battle as it was plotted before him on the great wall map. In addition the military and naval commanders could ask by radio-telegraphy for assistance, while fighter controllers in two ships were in direct contact with the fighter squadrons as they came in over the battle area and were able to change ground targets and direct air cover as the situation demanded.

The air co-operation was excellent (says a military report). Throughout the action there were frequent requests for smoke curtains to be laid and batteries to be bombed. These requests were met to the limit. In addition no enemy aircraft were allowed to interfere if they could be driven off and not many got through. Though damage was caused to several ships by near misses, the only major success which the German air force could claim was a destroyer and this itself was an accident. She was hit and badly damaged by a bomb from a Junkers 88 which jettisoned its load on being attacked by one of our Spitfires. By ill-luck the destroyer

happened to be underneath where the bombs fell. The return of the force to England was mostly uneventful thanks to the air cover which was maintained over the ships.

The first sorties were flown before dawn and combats over the battle area began soon after daylight. At first, however, the air fighting was not intense as the Germans seemed unaware of the scope of the action and sent not more than 25 to 30 fighters to the scene. But as the morning wore on the formations increased, until finally the enemy was employing most of his available resources on the Western Front. In reply Fighter Command flew over 2000 sorties during the day and there were many vigorous encounters; in fact, not since the Battle of **Britain** had the air fighting been on such

¹ Air Chief Marshal Sir Trafford Leigh-Mallory, KCB, DSO, Order of Polonia Restituta (Pol), Order of Kutuzov (**USSR**), Legion of Merit (US); born Mobberley, Cheshire, 11 Jul 1892; joined Lancashire Fusiliers 1914; seconded RFC 1916 and **RAF** 1918; permanent commission **RAF** 1919; AOC No. 12 Fighter Group, 1937–40; AOC No. 11 Fighter Group, 1940–42; AOC-in-C, Fighter Command, 1942–43; AOC-in-C, AEF, 1943–44; missing 14 Nov 1944 and death presumed.

an intensive scale. However, while the Dieppe raid provided the occasion for the battle with the **German Air Force** which Fighter Command so ardently desired, British losses included 88 Spitfires and Hurricanes for the destruction, according to German records, of 48 enemy machines. The British losses were much heavier than those suffered on any one day during the Battle of **Britain**. But at Dieppe the Spitfires and Hurricanes were operating over enemy territory at long range from their bases, and many machines damaged in combat or by anti-aircraft fire came down in the sea during the return flight.

Many New Zealanders took part in the various operations and there were some eventful flights. Before dawn Squadron Leader Sutton ¹ led Bostons from No. 605 Squadron to attack gun positions covering Dieppe

harbour, and although haze and darkness made location of their target difficult the pilots reached and bombed the area. Flight Lieutenant Spurdle was on patrol with No. 91 Squadron from dawn in search of E-boats and any other enemy craft likely to interfere with the landings. The Spitfires continued such reconnaissance throughout the day, Spurdle flying four patrols. New Zealanders also flew with each of the first three Hurricane squadrons that went in at first light to attack gun positions and strongpoints on the seafront. They met fierce opposition. Pilot Officer Barton,² who was flying with No. 245 Squadron, was one of five pilots shot down. The Hurricanes from No. 43 Squadron, with which Flight Sergeants Smith³ and Webster⁴ were flying, were also badly shot up. One pilot baled out over the Channel and was later rescued and another crash-landed at Tangmere, but both Smith and Webster survived to take part in further attacks during the morning. In No. 3 Squadron, led by Squadron Leader Berry,⁵ one pilot was shot down, while another had his starboard petrol tank shot out by flak and crash-landed on Brighton golf course. Berry led his Hurricanes in further sorties during the morning and on their fourth mission, while attacking batteries on the east headland of Dieppe during the withdrawal, they were intercepted by Focke-Wulfs. Berry was seen to be heavily engaged before his machine burst into flames and crashed on the cliffs. With the Hurricanes from No. 175 Squadron, Pilot Officer Peters was also in combat at mid-morning.

¹ Squadron Leader K. R. Sutton, DFC; **Palmerston North**; born **Wellington**, 18 May 1919; joined **RAF** Mar 1939; transferred **RNZAF** Mar 1944.

² Pilot Officer J. E. Barton; born **Christchurch**, 29 May 1921; motor mechanic; joined **RNZAF** Jul 1940; killed on air operations, 19 Aug 1942.

³ Warrant Officer M. D. Smith; **Christchurch**; born **Christchurch**, 31 Mar 1920; clerk; joined **RNZAF** Feb 1941; p.w. 13 Nov 1943.

⁴ Flying Officer W. J. Webster; England; born **Auckland**, 11 Oct 1920; school teacher; joined **RNZAF** Feb 1941.

⁵ Squadron Leader A. E. Berry, DFC; born **Yorkshire**, 1 Apr 1917; joined RAF Mar 1940; commanded No. 3 Sqdn, 1942; killed on air operations, 19 Aug 1942.

After the pilots had made a determined low-level bombing attack on a troublesome gun position, they became involved in the air fighting which was going on over the port. Peters was attacked by a Focke-Wulf 190 which dived on him from above. He immediately flicked his Hurricane over in a half roll and, as the enemy machine shot past in its dive, sent a stream of bullets tearing into it. The Focke-Wulf turned over and went down into the sea. In further combat he saw strikes on a second enemy fighter but 'was too busy to observe results'. One of his fellow pilots caught a Heinkel diving to bomb destroyers off the beaches and set it on fire.

Among the New Zealanders who led Spitfires on covering patrols were Squadron Leaders Carlson, Kilian and Yule, and Flight Lieutenants Crawford-Compton and Griffith. Yule led his No. 66 Spitfire Squadron during the morning as escort to Hurricanes attacking enemy strongpoints. Over Dieppe anchorage, he saw Dorniers bombing shipping and led his pilots against them. They shot down one German bomber, drove the others off, then rejoined the Hurricanes and escorted them back to England. Later Yule took his squadron to escort Bostons laying a smoke screen to cover the withdrawal. Carlson led No. 154 Squadron on each of its four patrols during the day. While covering the withdrawal, the Spitfires intercepted and drove off Dorniers which were attacking the ships. Carlson chased one Dornier through the cloud and smoke, finally overtook it and sent it down; fellow pilots finished it off and saw it crash into the sea. Kilian's No. 122 Squadron, which he led on three patrols during the morning, also attacked enemy bombers over Dieppe. On their second sortie Kilian and Sergeant Peet ¹ shared in the

destruction of a Dornier which they intercepted over the town and then chased inland over the tree tops. On their third patrol Kilian was slightly wounded in an engagement with Focke-Wulfs, which came in as the Spitfires were intent on preventing bombers from attacking the ships. No. 122 Squadron was therefore led on its fourth and fifth patrols of the day by Griffith, who already had damaged two Dorniers in the morning engagements—in one of them he was in a 'free for all' with six Dorniers. Crawford-Compton was twice in combat during patrols in which he led a section of No. 611 Squadron Spitfires. He drove one Focke-Wulf down during a brief engagement over Dieppe in the early stages of the assault. Then a few hours later, while escorting Fortress bombers back from an attack on the airfield at Abbeville, Focke-Wulfs came climbing up so turned and opened fire and kept on until I had to break away to avoid a collision. Saw one enemy machine catch fire, then four of them attacked me. By this time I

¹ Flight Lieutenant W. W. Peet, DFC; England; born [Dannevirke](#), 23 Jul 1920; farmhand; joined [RNZAF](#) Feb 1941.

was separated from my section and tried doing steep climbing turns but they had the advantage and kept on attacking. Was gradually able to work my way to the coast but was chased half way across the Channel.'

The New Zealand Spitfires flew four patrols over Dieppe as part of the No. 12 Group wing led by Wing Commander Jameson. On the first patrol of the morning, in which Jameson flew a Spitfire from No. 485 Squadron, the formation met enemy fighters in strength as soon as they approached Dieppe and dogfights began at once. Three Focke-Wulfs were shot down and several others badly damaged, but five Spitfires were lost. The New Zealanders, however, escaped casualty and were able to report the destruction of two enemy machines. Jameson attacked a Focke-Wulf which was diving on one of his Spitfires and sent it down in flames. Other pilots saw it hit the sea. Flying Officer Chrystall ¹ attacked another Focke-Wulf and saw the pilot bale out as it went down, while a

third enemy fighter was seen flying inland, smoking badly, after it had been attacked by Flying Officer Black.² The squadron's next two patrols were without incident, but while covering the return of the ships during the afternoon the Spitfires intercepted a formation of Dorniers and drove them off. There were some brief exchanges of fire as pilots chased the bombers among the clouds but no conclusive combats were reported.

During the day's fighting many British fighters were damaged and some reached England only with difficulty. After one combat Pilot Officer Copland³ found his Spitfire had been badly hit so he headed for home, but about half a mile from the English coast his engine stopped and he was just able to reach the coast and crash-land in a field. Copland had already completed four patrols with his No. 131 Squadron, and in various encounters had shared in the destruction of two enemy aircraft and had damaged a third.

Many pilots who failed to reach the English coast in their damaged machines owed their survival to the sustained efforts of the Air Sea Rescue organisation, particularly the **RAF** launches, three of which were lost during the day while attempting to rescue airmen from the Channel. Several New Zealanders flew with the ASR flights which searched for survivors and directed surface craft to pick them up. Altogether during the day, 30 pilots were rescued from the sea as the result of the combined efforts. Wing Commander Blake, who led a Spitfire wing, was one of the few British

¹ Flight Lieutenant C. Chrystall, DFC; **Foxton**; born **Foxton**, 21 Nov 1916; joined **RAF** Jul 1938; transferred **RNZAF** Jul 1945.

² Flight Lieutenant L. S. Black, DFC; born **Wellington**, 12 Apr 1914; barrister and solicitor; joined **RNZAF** Apr 1940; killed in flying accident, 5 Mar 1945.

³ Flight Lieutenant H. G. Copland; Gore; born **Mataura**, 21

Feb 1919; farmer; joined [RNZAF](#) Jan 1941.

pilots unfortunate enough to be picked up by the enemy. On a morning patrol his formation was heavily engaged by German fighters. At one point Blake saw a Focke-Wulf coming up underneath another Spitfire. He dived and shot it down, but before he could recover height another Focke-Wulf came at him from above in a head-on attack.

There was an explosion on the windscreen and I was blinded. Put my hand to my helmet and felt it was partially burnt away, so jettisoned the hood, released my straps, slammed the stick forward then went hurtling out. My parachute opened shortly before I hit the water, and after inflating the dinghy I struggled into it. My eyes were very painful and felt as though they were filled with sand which turned out to be fine specks of glass in the eye balls.

Soon the tide swept the dinghy away from the French coast, and all that day and night Blake drifted at the mercy of wind and tide. The following afternoon the wind changed and began to blow him towards the English coast, but just as darkness was falling a German patrol boat sighted his dinghy and picked him up. After receiving attention from an eye specialist in [Paris](#), Blake was put on a night train for [Germany](#). Pretending to be ill during the journey he evaded his guards and jumped off, but unfortunately the train had increased speed and he hit the ground heavily. He was recaptured when forced to seek help for his injuries.

The closing months of 1942 saw the squadrons and wings continuing with sweeps and the escort of bombers over enemy territory; smaller formations also flew across the Channel to make further low-level attacks on ships and land targets. In August Fortresses of the [United States Air Force](#) began operations against targets in northern [France](#), and during the next months Spitfires frequently escorted them on these missions. On 28 August Fortresses attacked the aircraft factory at Meaulte, near [Amiens](#), one of the largest aircraft establishments in

France, where the Germans were now repairing bombers and fighters. The American bombers were covered and escorted throughout their flight by a large force of British fighters drawn from eight squadrons, while others flew out later to cover the return journey. There were several skirmishes with Focke-Wulfs; among the Spitfire pilots who reported successful combats were Crawford-Compton, whose No. 611 Squadron formed part of the bombers' close escort. Near the target, he led his section down to intercept five Focke-Wulfs which were coming up from behind. After giving the leading machine one short burst he saw the pilot bale out. Then, together with several of his fellow pilots, he attacked another enemy aircraft; but although it went spinning down they did not see it crash. Crawford-Compton, who had begun his operational career with the New Zealand Spitfire Squadron on its formation, was now recognised as 'a fighter pilot and flight commander of exceptional merit.' Before leaving to take command of No. 64 Squadron at the end of 1942, he had raised his score to at least eight enemy aircraft destroyed. After one engagement in November he reported briefly:

We had just turned back into **France** after being warned that enemy aircraft were approaching from St. Omer when I spotted eight Focke-Wulfs about 4000 feet below us. Warned the squadron and we dived on them. They split up in all directions. One Focke-Wulf shot up almost vertically and as it turned off the top of the climb I opened fire; the elevators and part of the rudder came away, the machine turned over on its back, flew like this for a few seconds and then dived towards the ground. Saw the pilot bale out as it went down.

This combat took place when Compton's squadron was making a sweep over St. Omer with the **Biggin Hill Wing** as a diversion to a large attack on Le Havre.

The experiences of No. 485 Squadron during the last months were typical of those of many squadrons with which New Zealand pilots were flying. As part of Jameson's No. 12 Group wing, the New Zealand Spitfires flew many sorties as cover for the Fortresses, Liberators,

Bostons and Venturas. On 9 October, when 36 squadrons co-operated with more than 100 American Fortresses and Liberators in their attack on the Fives-Lille locomotive works—the largest daylight bombing raid thus far launched—the New Zealanders flew in the main diversionary sweeps over enemy airfields. Early in December when **RAF light bombers, including Venturas from No. 487 New Zealand Squadron, attacked the Philips radio works at **Eindhoven** in **Holland**, No. 485 Spitfires covered the withdrawal. They patrolled the Scheldt Estuary but sighted no enemy aircraft. On the way back, however, they found several dinghies and were able to help in the rescue of crews from bombers which had come down in the sea.**

On many occasions a few Spitfires flew in low over the enemy coast and attacked targets of opportunity—railway engines, anti-aircraft batteries, ships and barges and military installations. In one such operation towards the end of November, Squadron Leader Grant led five Spitfires to attack ships and barges in the Dutch canals. As the formation approached the Dutch coast Grant became separated from the others and, flying on alone, encountered a Heinkel 115 which he promptly shot down into the sea. Meanwhile the other pilots had attacked a tanker barge on a canal; as their cannon shells went home, there was an explosion followed by clouds of black smoke. On the return flight, Flight Lieutenant Shand ¹

¹ **Flight Lieutenant M. M. Shand, DFC; **Greytown**; born **Wellington**, 20 Feb 1915; salesman-clerk; joined **RNZAF** Nov 1939; p.w. 28 Nov 1942.**

and Sergeant Tucker ¹ went down to shoot up a train. As Tucker flew in to attack, his machine bounced off a mound of earth and he had scarcely recovered and rejoined Shand when they were attacked by two Focke-Wulfs. Shand was shot down and taken prisoner but Tucker was fortunate to escape after his machine had been hit. One of the other two pilots, Sergeant Norris, ² also failed to return.

While offensive operations were the main concern of the day fighter squadrons throughout 1942, a considerable effort had to be devoted to the defence of the **United Kingdom** and the interception of the Germans' small but cleverly conceived raids against British shipping and coastal targets. On certain occasions an intensive effort was made to protect convoys and naval forces, notably at the end of October 1942, when large concentrations of shipping assembled and sailed for the landings in North Africa.

The small convoys sailing along the eastern and southern coasts were a favourite target for the enemy raiders, but many of their attacks were made at dawn or dusk or in thick weather when it was difficult for British fighters to intervene. In fact the 'bandits' took every advantage of darkened land, sky, or cloud to cover their approach. Frequently their attacks came from the direction of the land, which not only gave a dark background but also confused ships' gunners as to the identity of approaching aircraft. Occasionally Heinkel 115 seaplanes, having located a suitable target towards dusk, alighted on the sea to take off again and make an attack in the last few minutes of daylight, often just after the fighter escort had left. It was not easy for Fighter Command to counter these tactics, since the limited endurance of the contemporary fighters and the large numbers of convoys at sea made it impossible to provide continuous protection. However, the patrols maintained in the areas most likely for attack were often able to frustrate the raiders. The Germans were reluctant to attack ships when fighters were in the vicinity, and when intercepted they usually avoided combat and quickly sought refuge in the nearest cloud cover. This meant that the fighter pilots seldom had the opportunity for sustained combat. Few, in fact, were as fortunate as Pilot Officer Peters who, after one sortie early in June, was able to report the destruction of two enemy bombers that were attacking ships. On patrol between the Isle of Wight and Weymouth, he sighted anti-aircraft fire from a convoy and flew towards it. As he

¹ Flying Officer H. S. Tucker; **Palmerston North**; born **Greytown**, 26 Aug 1921; postman; joined **RNZAF** Sep 1941.

² Sergeant F. W. Norris; born **Wellington**, 23 May 1921; clerk; joined **RNZAF** May 1941; killed on air operations, 28 Nov 1942.

approached the ships he sighted five Junkers 88s. He dived on one of them and shot it down into the sea with his first burst. He then turned and chased another Junkers, caught up with it, and sent it down towards the sea with one of its engines on fire. Although almost out of ammunition, he pursued another bomber some distance across the Channel before shortage of fuel forced him to return to base.

In addition to their attacks on British shipping during 1942, the Germans also developed what came to be known as 'tip and run' raids against towns and military targets on or near the coast. It must be remembered that at this time the increasing bombing raids over **Germany** by the **Royal Air Force** were causing no little anxiety to the **German High Command**, and there was a growing demand for reprisals against Great Britain. Added to this the enemy was anxious to pin down in the **British Isles** as much as possible of the growing strength of the **RAF**. The Luftwaffe was now fully extended on the Russian and **Mediterranean** fronts and few bombers could be spared for an offensive against the **United Kingdom**. The Germans, therefore, adopted the expedient of employing the Messerschmitt, and later the Focke-Wulf fighter, each carrying one or two bombs, to make low-level attacks at a number of widely scattered points. The fighter-bombers flew across the Channel just above the sea to escape radar detection and swept over the coastal towns, dropped their bombs, machine-gunned streets, buildings and railways, and then quickly flew out again over the sea. Occasionally in cloudy weather small formations ventured inland—the city of Canterbury was attacked one Saturday afternoon in October during its most crowded shopping period—but the majority of the raids were

confined to coastal targets.

Such surprise attacks were difficult to defeat, for although Spitfire patrols were maintained as far as possible, the lack of warning received and the short duration of the attacks gave pilots little opportunity for successful interceptions. Fewer than a dozen of the tip and run raiders were destroyed during the first nine months of 1942. Two New Zealanders who had successes were Flight Lieutenants Pannell ¹ and Spurdle, both of whom flew with No. 91 Spitfire Squadron. On patrol over the south coast one misty morning in April, Pannell sighted two Messerschmitts flying in towards Hastings. He at once gave chase but lost sight of the enemy machines in cloud. When he saw them again he hung on until they came to a clear patch, whereupon he opened fire on the nearer machine. It went down in a gradual dive, hit the water,

¹ Squadron Leader G. C. R. Pannell, DFC; Croix de Guerre with Palm (Fr); Christchurch; born **Christchurch**, 22 Aug 1913; farmer; joined **RNZAF** Dec 1939.

bounced, and then went straight in. Spurdle was on patrol with another pilot in the same area one afternoon in July when they sighted four Focke-Wulfs flying above them. The two pilots climbed to the attack, and in the dogfight which followed Spurdle blew the tail off the leading enemy machine. The pilot baled out and was picked up by a British rescue launch. He was somewhat annoyed at being shot down as he claimed to be an 'ace' with 17 Spitfires to his credit.

In September 1942, by which time the German fighter-bomber attacks had become particularly irritating, the first few Typhoon squadrons to become operational were directed to interception patrols. Early in the month an enemy raider, with pieces flying off both engines and its rudder shot away, plunged into the sea off the north-east coast, giving Pilot Officer Perrin ¹ his first victim. Perrin was on patrol with another pilot from his No. 1 Typhoon Squadron when two German fighter-bombers were sighted. When the Typhoons gave chase the enemy

machines separated, so Perrin engaged one while his companion went after the other. A few moments later both machines were caught and, after a few accurate bursts, driven down in flames.

No. 486 New Zealand Squadron, which had now converted to Typhoons, was one of the units employed during the closing months of the year on interception patrols along the south coast, where the enemy attacks were most frequent. Regular patrols were begun early in October, and the first success came on the 17th when Pilot Officer Thomas ² and Flight Sergeant Sames ³ intercepted two Focke-Wulfs. After a long chase they eventually overhauled one of them, and their combined fire sent it crashing in flames into the sea. The squadron then experienced an unrewarding period which lasted until the middle of December, and it was little consolation that the efforts of other squadrons engaged on similar patrols were also largely unsuccessful. Flight Sergeant Downer ⁴ of No. 91 Spitfire Squadron was one of the few pilots who saw action in November. On a morning patrol he intercepted two fighter-bombers about to attack a minesweeper and shot one down into the sea. The other made off towards **France**. During this time the coastal patrols were maintained continually, except when weather made flying impossible. The Typhoons patrolled in pairs and maintained watch along a

¹ Flight Lieutenant D. P. Perrin, DFC; born **Wellington**, 27 Nov 1918; clerk; joined **RNZAF** Nov 1940; killed on air operations, 10 Sep 1944.

² Flying Officer G. G. Thomas; born **Te Awamutu**, 13 Mar 1918; clothing cutter; joined **RNZAF** Oct 1940; killed in flying accident, 9 Apr 1943.

³ Flight Lieutenant A. N. Sames, DFC; **Auckland**; born **Auckland**, 25 Jul 1918; carpenter; joined **RNZAF** Mar 1941.

⁴ Pilot Officer I. W. Downer; born **Christchurch**, 21 Dec 1920; electrical engineer; joined **RNZAF** Dec 1940; killed on air

given stretch of coastline, very much like 'policemen on their beat', an average nine or ten patrols of an hour's duration being flown daily by each squadron. From the end of October the New Zealanders flew from the forward airfield of Tangmere, in **Sussex**, and their 'beat' extended from St. Catherine's Point, Isle of Wight, to **Shoreham** near Brighton, a short stretch of coastline that was soon to become painfully familiar to the pilots. Only occasionally was the monotony relieved by a sighting and chase out to sea.

By December low-searching radar stations had been established at certain points on the south coast, so that earlier warning and more accurate information of the enemy's approach could be given to pilots on patrol. Interceptions became more frequent and Fighter Command was able to record the destruction of eleven low-level raiders during this month. Seven of these fell to pilots from the New Zealand Typhoon Squadron. On the afternoon of 17 December Flight Sergeant Murphy ¹ and Sergeant Taylor-Cannon ² intercepted two Messerschmitt fighter-bombers a few miles off the Isle of Wight, and a chase began with the aircraft skimming just above the wave tops. In attempts to escape both Messerschmitts twisted and turned, repeatedly crossing over and under each other, so that both were engaged by the New Zealanders in turn. Suddenly one Messerschmitt shot upwards, turned, and then dived straight into the sea. A few moments later the other, already hit in the fuselage and wings, burst into flames and crashed into the water. The following day Pilot Officer Thomas sighted a Dornier 217 a few miles south of Brighton and gave chase. He scored hits on the enemy machine and saw smoke pouring from one of its engines before losing his quarry in the clouds. Unanswered radio calls from the German bomber's base, and the discovery of wreckage from a Dornier later in the day, indicated that Thomas had succeeded in destroying the raider. On 19 December, after chasing two Focke-Wulf 190s at over 360 miles an hour almost to the French coast, Flight Lieutenant Sweetman and Flight Sergeant Sames were able to overhaul and attack them. Sweetman saw his target

disappear in cloud with smoke pouring from its engine, while Sames so damaged the other that the pilot was forced to bale out. On patrol three days later, Flying Officer Umbers and Flight Sergeant Gall ³ together attacked and destroyed a Dornier bomber. During the chase the enemy bomber 'flew so low that his slipstream left a

¹ Squadron Leader F. Murphy, DFC; England; born Bolton, Lancashire, 19 Jan 1917; clerk; joined **RNZAF** Mar 1941.

² Squadron Leader K. G. Taylor-Cannon, DFC and bar; born Oamaru, 20 Dec 1921; student; joined **RNZAF** Apr 1941; commanded No. 486 (NZ) Sqdn, 1945; killed on air operations, 13 Apr 1945.

³ Flight Lieutenant C. N. Gall, DFC; England; born Ngaruawahia, 10 Aug 1920; school teacher; joined **RNZAF** Mar 1941.

broad wake on the water'. Two Messerschmitt pilots who flew across the Channel on Christmas Eve were intercepted over the Isle of Wight and shot down into the sea by Thomas and Murphy after a long pursuit. This run of successes marked the beginning of a more fruitful period in the campaign against the tip and run raiders until, by the middle of the following year, enemy casualties reached a point where he was forced to abandon this form of attack.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

CHAPTER 17 – NIGHT FIGHTERS, 1942

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Night Fighters, 1942

WITH practically the whole of their bomber strength deployed on the **Mediterranean** and Russian fronts throughout 1942, the Germans were unable to launch either large or sustained night raids against the **United Kingdom**. However, during the early months they made skilful use of their small bomber force remaining in the West in minelaying and bombing attacks against shipping, with occasional raids on such ports as Hull and Portsmouth. By restricting their effort to such targets and by employing tactics of caution in approach and speedy withdrawal, the Germans not only conserved their slender force but also succeeded in inflicting considerable damage on coastal shipping, as well as tying up substantial British resources in minesweeping and in defensive air patrols.

The situation became more difficult for the Germans with the heavier and more concentrated attacks by Bomber Command in the spring of 1942, and they were forced to plan some stronger form of reprisal. In particular the **RAF** raids on **Lubeck** and **Rostock**, at the end of March and April respectively, brought a shrill outcry from the German propaganda ministry and a speech by **Hitler** in which he threatened to 'rub out' British cities one by one as a reprisal for each and every **RAF** attack. He spoke of taking Baedeker's Guide and marking each British town off the guide book as it was destroyed. A series of German reprisal raids, thereafter known in **Britain** as the 'Baedeker raids', followed, the British cathedral cities of Bath, Exeter, Norwich and **York** being the principal targets. Like **Lubeck** and **Rostock** these were mediaeval towns very susceptible to fire; and they were weakly defended, having no balloon barrages and few anti-aircraft batteries. Consequently, in low-flying attacks, relatively small forces of German bombers were able to concentrate incendiary and high-explosive bombs. Fires spread rapidly through the narrow streets and highly combustible shopping centres, where considerable damage was done. But German air force losses were heavy, especially among the reserve training units from which

instructional crews, who could ill be spared, had been thrown in. Very soon the attacks became less frequent, and within a month the series of Baedeker raids came to an end. Thereafter the only serious night raids were those against **Birmingham** at the end of July, apparently as a reprisal for Bomber Command's successful attack on **Hamburg** on the night of the 26th. They brought further losses to the Germans and marked the final failure of their plans for reprisals. With the improving British defences and the weakness of their bomber force in the West, the Germans found it impracticable to launch further large-scale night attacks on inland targets, and for the remainder of 1942 they reverted to minelaying operations at night, with occasional bombing attacks on ports where interception was less likely.

To meet the German night attacks and to prepare for any intensification of the night bombing during 1942, Royal Air Force Fighter Command maintained some twenty-five squadrons specially trained in night fighting. These units were equipped with a variety of aircraft, including Beaufighters and Defiants fitted with special radar equipment, and Havocs and Bostons which carried the Turbinlite searchlight and flew in company with Hurricane fighters. By the middle of the year the twin-engined Beaufighter was predominant and the Defiant was being replaced by the faster and more versatile Mosquito for night fighting.

Five of the **RAF** night fighter units were commanded by New Zealanders during 1942. Squadron Leader R. F. Aitken continued with No. 3 Hurricane Squadron which he had led since April 1941 and which, in the words of his group commander, 'he had welded into a fine team whose spirit and organisation were renowned throughout No. 11 Group'. There was a strong New Zealand representation among the pilots of No. 3 Squadron, and by a happy chance their base at Hunsdon, in Hertfordshire, was under the command of a New Zealander, Wing Commander J. S. McLean, who had led a squadron in the Battle of **Britain** and won distinction in early fighter operations. In April, when Aitken was appointed to Headquarters Fighter Command to organise

night intruder operations over enemy territory, he was succeeded by Squadron Leader A. E. Berry, who had flown with No. 3 Squadron since September 1940 and had served as a flight commander under Aitken. One of the first night fighter units to be re-equipped with Mosquitos, No. 151 Defiant Squadron, was led by Wing Commander I. S. Smith. Smith had already enjoyed a successful career as a night fighter pilot and was to win further distinction for his fine leadership during 1942. Squadron Leader Player,¹ who had done valuable work as a flying instructor in the early months of the war, was throughout this year in charge of No. 255 Squadron, one of the

¹ Wing Commander J. H. Player, DSO, DFC; born **Auckland**, 13 Jul 1914; joined **RAF** 1937; commanded No. 255 Sqdn, 1942; Personal Staff Officer, AC-in-C, AEA, 1944–45; Staff duties, DG of P, **Air Ministry**, 1945; died of injuries received in flying accident, 8 Aug 1947.

units whose Defiants had achieved considerable success during the blitz in the early months of 1941. Now re-equipped with Beau- fighters, this squadron was to take an active part in both night patrols and the protection of coastal shipping. One of the Turbinlite units was commanded by Squadron Leader D. F. Wilson, who had flown with Fighter Command from the outbreak of war. The Turbinlite flights were now equipped with **Boston** aircraft, stripped of their armament and modified to carry a searchlight in the nose of the machine.

Various methods of interception were employed in the night patrols during 1942, but the principal method was that in which aircraft fitted with the special AI (Air Interception) radar apparatus were directed towards enemy raiders by ground controllers, who obtained information of the enemy's course and height by means of radar and the reports of the **Observer Corps**. However, even when ground control succeeded in guiding the night fighter towards an enemy machine, the final stage of interception was not easy. The indication which might appear on the aircraft's radar screen needed to be correctly interpreted by the observer,

and then the pilot had to carry out instructions as to course, height and speed with meticulous accuracy if he was to achieve a visual sighting.

The crews of the night fighter aircraft were thus highly skilled teams working together in co-operation with ground control, and they had to spend much time practising both by day and by night. Whereas the Spitfire pilot flying by day could always avoid flying in cloud because it involved instrument flying, the night fighter pilot had to fly on instruments often from the moment of take-off to the moment of landing. It was hard work demanding the utmost patience, since only occasionally during this period of limited enemy activity did the intermittent patrols bring sighting and attack. On the other hand there was always that eternal enemy, the weather. It killed quite a few—often through the unlucky roll of the dice—when they flew into high ground or lost their way in storm. As one squadron commander summed it up, ‘the night fighter’s job was to beat the weather and fly on instruments; they had to be good if they wanted to survive’.

An example of successful co-operation occurred on the night of 8 March when Squadron Leader R. M. Trousdale, flying a Beaufighter from No. 409 Squadron, shot down a Heinkel bomber near Hull. This particular night enemy bombers were active off the east coast laying mines and making scattered bombing attacks, but Trousdale had been on patrol for nearly two hours before he was directed towards an enemy raider off the mouth of the Humber by his ground control station. Eventually his radar operator picked up the enemy machine and, guided by his directions, Trousdale soon saw the dark shape of a Heinkel below him. He opened fire and saw it burst into flames and go down to explode on the ground. A few weeks later Trousdale found and stalked a Dornier off the Lincolnshire coast and, catching up with the enemy bomber, was able to keep it in sight and with successive bursts set its engines on fire. The Dornier then crashed into the sea. Among the few other pilots to achieve such double success was Pilot Officer G. E. Jameson,¹ who captained a Beaufighter of No. 125 Squadron. One night towards the end of July he was sent to intercept enemy bombers approaching the

Midlands from the Irish Sea, and over Cardigan Bay a radar indication eventually led to the sighting of a Heinkel bomber. Return fire damaged the Beaufighter but, aided by the light of a full moon, Jameson kept his target in view. The enemy machine began spiral diving turns but Jameson hung on. 'As I closed in to point blank range,' he later reported, 'I observed a large glow on the starboard engine. The enemy aircraft then went into a dive and continued to go down until it hit the sea.' A few nights later Jameson shot down another Heinkel near Milford Haven. As the German bomber turned and twisted in an effort to escape, the two machines almost collided but Jameson pressed home his attack and set the Heinkel on fire.

The efforts of the specially equipped aircraft were supplemented by fighters operating in conjunction with searchlights. The system used was similar to that employed by the Germans over [Belgium](#) and [Holland](#) against British bombers flying into [Germany](#). Approach areas were divided into belts and the fighters, each operating in a limited area, patrolled behind the searchlights ready to pounce upon any intruders illuminated or indicated by their beams. On occasion Spitfires and Hurricanes also operated directly over a target in co-operation with guns and searchlights, but this method was only employed during the brief full moon period and against concentrated raids when there was a reasonable chance of raiders being intercepted visually. During 1942 patrols were also continued by aircraft equipped with the Turbinlite to enable an accompanying Hurricane fighter to see and attack, a form of interception that had been developed early in 1941 when the enemy was making heavy raids and the fighters were achieving little success on dark nights. Unfortunately this novel technique was still in the experimental stage when heavy raids ceased. Subsequently, the enemy's small and scattered attacks gave few opportunities for testing this rather difficult method of night interception, and the successful development of more orthodox and less cumbersome

¹ Flight Lieutenant G. E. Jameson, DSO, DFC; Rotherham, North Canterbury; born [Christchurch](#), 20 Nov 1921; farmer;

methods led to the disbanding of the Turbinite flights towards the end of 1942.

While some squadrons had better luck than others, this year was for most pilots one of dull and unrewarding effort. The limited enemy activity meant they were compelled to spend many hours in practice flights with only occasional operational patrols, and even then there was seldom the satisfaction of sighting and attack. The interception of enemy raiders flying in low to lay mines and to attack ships along the coast was particularly difficult. Ground-controlled interception could not as yet be practised over all the sea approaches, while the contemporary airborne radar apparatus was largely inefficient at low levels where the tiny 'blip' which the enemy machine gave on the radar screen would be confused by ground and sea reflections. However, when the defenders were aided by the moon or the last of the daylight, they were often able to make successful interceptions over the sea. It was at dusk one winter's evening towards the end of February that Defiants from Smith's No. 151 Squadron succeeded in breaking up an attack on a convoy off the Norfolk coast.

Thick cloud covered the sky and in some places was so low that it reached down to the sea (says an official report of the action). Visibility was reduced to a minimum and the Defiants had to fly just above the water to keep the convoy in view. They did so for an hour with nothing but the slow rolling and pitching of the ships to break the monotony. Then suddenly a ship at one end of the convoy opened fire. Attracted by the bursts from the guns. Smith sighted two Dorniers flying just above the sea. He swung round and cut across in front of one, only avoiding collision by a sharp turn. His gunner opened fire as the machines passed one another and his second burst sent the Dornier crashing into the sea. Smith then turned to attack a second Dornier but as he did so a Junkers 88 came out of cloud on his tail not two hundred yards away. His gunner opened fire and saw bullets spattering the fuselage of the enemy

machine as it swung away back into cloud cover. Meantime another of the Defiants had manoeuvred into position to attack the second Dornier. With both aircraft flying just above the sea, the Defiant gunner opened fire and saw strikes on the wings and engines of the enemy machine before it disappeared. A third Defiant pilot sighted two other Dorniers and chased each of them in turn back into cloud. A sixth machine could not be brought to battle, it merely appeared for a moment out of the clouds and when the German pilot saw a Defiant heading for him he went straight back into cover.

During 1942 New Zealanders also flew with the few squadrons whose aircraft crossed the Channel by night to harass airfields on the Continent. These intruder operations had been started during the period of heavy night raids after the Battle of [Britain](#), when it was hoped to reduce the scale of the enemy attack by patrols over the bases from which his bombers operated. Although activity against the [British Isles](#) was on a much smaller scale during 1942, intruder patrols were flown whenever the German bombers operated in any strength. The Hurricanes, Bostons and Havocs, and later the Mosquitos, also operated against enemy airfields at which night flying training was in progress, and on occasion they attacked the bases from which the German night fighters took off to intercept British bombers flying into [Germany](#). Carrying a few bombs as well as cannon and machine guns, and apprised by the British wireless interception service of airfields worth visiting, the intruder aircraft would endeavour to cause the maximum interference with enemy operations by attacking his machines as they were landing and taking off, and by bombing and machine-gunning airfield buildings and runways. Although the effort expended by Fighter Command on these missions during 1942 was relatively small, it proved a most profitable venture for, in addition to the enemy machines actually damaged or destroyed, there was a considerable moral effect. To be attacked at the end of a long and tiring flight just when about to land, or to see returning aircraft shot down over one's own airfield, was regarded by British and German aircrew alike as a most unnerving experience. Evidence of the success of Fighter Command's effort during

this period was provided by the move of many of the German bases back out of range of the intruder aircraft, but with the advent of the long-range Mosquito in night operations this move was to avail the enemy little.

Some of the New Zealanders who took part in these operations during 1942 flew the long-range Hurricanes of No. 1 Squadron from Tangmere, in **Sussex**, and of No. 3 Squadron Detachment based at Manston, the large forward airfield on the coast of Kent. Others flew Havocs and Bostons with No. 23 Squadron from both these bases. During the second half of the year Wing Commander Aitken was a prominent personality in intruder work. After a period of organising duties at Headquarters Fighter Command, he was appointed to command the base at Bradwell Bay in Essex. Squadron Leader Sutton, after serving with No. 23 Squadron in the early months, was then made a flight commander in the newly formed No. 605 Squadron.

For the greater part of the year the majority of the enemy aircraft destroyed by the intruders were shot down by the long-range Hurricanes, and it was while flying these fighters that Flight Lieutenant Scott,¹ Pilot Officer Hay,² and Flight Sergeant Gawith³ had particular

¹ Group Captain D. J. Scott, DSO, OBE, DFC and bar, Croix de Guerre (Bel); Greymouth; born **Ashburton**, 11 Sep 1918; salesman; joined **RNZAF** Mar 1940; commanded No. 486 (NZ) Sqdn, 1943; Wing Leader, Tangmere, 1943–44; commanded RAF Station, Hawkinge, 1944; No. 123 Wing, 2nd TAF, 1944–45.

² Pilot Officer B. H. Hay, DFC; born **Wellington**, 4 Aug 1914; accounts clerk; joined **RNZAF** Jan 1941; killed on air operations, 18 Aug 1942.

³ Flight Sergeant P. M. Gawith, DFM; born **Masterton**, 19 Mar 1919; farmer; joined **RNZAF** Jul 1940; killed on air operations, 29 Jul 1942.

success. It should be noted that while the Hurricanes possessed advantages of manoeuvrability and fire power in combat, the pilot flew alone and had to do his own navigation and do it accurately before he could hope to reach his target area.

Scott had joined No. 3 Squadron early in 1941 and had transferred to night fighting towards the end of that year. In September 1942, after commanding the night fighter detachment at Manston, he was posted to the night operations staff at Fighter Command, by which time he had been credited with the destruction of seven enemy aircraft during intruder sorties. One night early in February he was sent to intercept minelaying aircraft returning to their base at Soesterberg, in **Holland**. He met thick ice-laden cloud as he flew across the Channel, and only after some difficulty was he able to check his position by a known enemy beacon near the coast before setting course for his target. As he flew in over the Dutch coast the sky cleared and searchlights attempted to pick out his machine, but they were no more successful in distracting him from his purpose than the dummy airfield near Gilze which was suddenly illuminated. As Scott approached his target, searchlights lit up some thin cloud below him and silhouetted an enemy machine heading in the same direction. He dived and opened fire. He saw his second burst strike the starboard engine and almost immediately afterwards the enemy plane caught fire and went down. On another patrol towards the end of May, thick haze over the Dutch coast again made navigation difficult but Scott located the enemy airfield which was his objective and circled it at a height of about 1000 feet. Soon he sighted a German aircraft just below him, with its navigation lights on and preparing to land. Manoeuvring his Hurricane into position slightly above and just behind his target, Scott gave it three short bursts. The enemy machine began to glow and then went straight on down to crash near the end of the flare path. From the tail lights it appeared to turn a complete somersault before catching fire. Scott's further exploits included the shooting down of a Junkers 88 into the sea off the Dutch coast, a few miles north of the Hague, and the destruction of another bomber over the airfield at **Eindhoven**.

Hay, who had begun night operations towards the end of 1941, was to be credited with the destruction of four enemy aircraft before losing his life in August 1942, when his Hurricane crashed into the Channel shortly after he had taken off on patrol. A sortie one night in May was particularly eventful. He took off from Manston shortly after midnight and flew across the Channel towards the Dutch coast, his objective being the large airfield at Schipol, near [Amsterdam](#). Although there was considerable haze over the sea, Hay was able to fix his position by a German beacon on the island of Schouwen and then fly inland. As he approached his objective, the airfield lights came on and he was given a green flash on an Aldis lamp—the enemy had apparently mistaken his Hurricane for one of their own returning bombers. Shortly afterwards he sighted the lights of an enemy machine preparing to land but it was some way off, and before he could manoeuvre his Hurricane into position for an attack the German pilot had landed. A few moments later, while patrolling between the airfield and the coast, he saw the lights of another machine coming over the sea from the west. Hay attacked at point-blank range and the bomber rolled over and went down. Then, almost before he had recovered from this engagement, he sighted another aircraft approaching the coast. With the machine silhouetted against the sea, the New Zealander was able to identify it as a Heinkel bomber and a few well-aimed bursts sent it crashing into the water near the shore. On a patrol in the same area towards the end of June, Hay had the unusual experience of seeing a Junkers 88 at which he fired suddenly swerve and crash into another bomber flying near it. He afterwards reported:

There was a slight explosion and a shower of debris fell streaming to earth like a huge shower of incendiaries. The two enemy aircraft fell in pieces ... and as I orbitted I could see a burning mass on the shore for five or ten minutes.

Gawith, whose brother, Squadron Leader A. A. Gawith, had been one of the pioneers of intruder operations, began flying with No. 3 Squadron towards the end of 1941. Before he was reported missing towards the end

of July 1942, Flight Sergeant Gawith was credited with the destruction of at least two enemy machines. One of these he intercepted when on patrol over the airfield at **Eindhoven** early in June. Gawith sighted the enemy plane as it was approaching to land and, quickly turning in behind, he sent it down in flames to crash on the airfield below. A few weeks later, when on patrol over Soesterberg, he sighted a Heinkel bomber circling the airfield and flashing its indication lights. Gawith came into range as the Heinkel made its final turn in to land. After his attack the bomber flew on for a few moments and then dived down to explode on the ground. Just before dawn on this same patrol, Gawith attacked and damaged a Dornier in a running fight which carried him towards the Zuyder Zee. When the Dornier finally disappeared in the haze above the sea, one engine appeared to be on fire and the other was emitting a trail of smoke.

During the closing months of 1942 enemy activity against **Britain** by night showed a marked decline. The only serious raid of this period was against Canterbury on the last night of October, when an estimated total of 35 sorties was flown by two waves of enemy bombers, and of these four were destroyed by night fighters and three by anti-aircraft fire. This reduction in enemy activity meant that the British crews flying intruder missions over the bomber bases in **Holland** and northern **France** found darkened airfields and few targets. Their objectives were then extended to include the attack of ground and rail targets, and during the last two months pilots engaged on such roving patrols were able to report 50 attacks on trains.

Thus by night, as well as by day, there was a distinct change of emphasis in British fighter operations as they moved forward from the defence of the **United Kingdom** to carry the air war over enemy territory. For the Germans now found it impossible to renew the air attack against **Britain** on any appreciable scale either in daylight or at night. The expected victories on the Russian and Mediterranean fronts had failed to materialise, so that the air forces which the enemy had hoped to turn upon the **British Isles** were just not available. Instead the **Luftwaffe** was

forced more and more on to the defensive in Western Europe as the need arose to protect the occupied territories and **Germany** itself against the steadily increasing Allied air attacks. During 1942 it had been necessary to double the night fighter defences in the West, and by the end of the year it was evident that a similar expansion of day fighter defences was also required.

Indeed, the closing months of 1942, which may well be regarded as the second major turning point in the war, found the **German Air Force** no longer the all-powerful weapon with which victory might be assured. In the West, where the air war had been continuous and the growth of Allied air power slow, if relentless, no outstanding clash of arms marked this change in enemy fortunes; but in **Russia** and the **Middle East** the battles at **Stalingrad** and **El Alamein**, fought after exhausting campaigns, had disastrous effects on the efficiency of the **Luftwaffe**. On 19 November 1942 the Russians launched their historic attack, cutting the communications of the German army besieging **Stalingrad**; ten weeks later, despite desperate German efforts at supply and relief, Field Marshal von Paulus with his remaining force of 46,000 men was compelled to surrender. The supply operations at **Stalingrad** involved some 850 German aircraft, and losses in the period of just over two months amounted to 285 machines, more than a third of the force employed. Many of these were bomber aircraft converted for supply dropping, a fact which led Goering to remark bitterly after the campaign: 'There died the core of the German bomber fleet.' In the **Mediterranean** theatre, where one quarter of the total German air strength was deployed, the opening of the Allied offensive in North Africa in October brought more battle losses and, as in **Russia**, further wastage through the disorganisation consequent on retreat, the inadequacy of repair facilities, and a shortage of fuel.

Until the end of 1942 the Germans had managed to sustain the air war on three fronts by frequent transfer of units from one theatre of operations to another, and from one section to another of the same front. But after these reverses and in the face of the simultaneous

pressure in **Russia**, the **Middle East** and from bases in **Britain**, the **German Air Force** could no longer meet its opponents one by one, and, by denuding quiet areas, concentrate forces to achieve local air superiority. But the German military leaders were slow to realise that they had lost the strategic initiative; still less were they inclined to accept the advice of their Air Staff, which included capable personalities such as Field Marshal Milch, that the **Luftwaffe** was insufficient in both numbers and quality for the new phase of operations which faced it in 1943. None the less, even with the deftest exploitation of the advantages inherent in operating on internal lines of communication and defending a perimeter, German air superiority was no longer assured.

This change in the balance of air strength was noted by the British Prime Minister when, in a review of the whole war situation towards the end of 1942, he declared:

Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning. Henceforth **Hitler's** Nazis will meet equally well armed, and perhaps better armed troops. Henceforth they will have to face in many theatres of war that superiority in the air which they have so often used without mercy against others, of which they boasted all around the world, and which they intended to use as an instrument for convincing all other peoples that resistance to them was hopeless.

Already the growing ascendancy of Allied air power was being demonstrated with marked effect in the advance from **El Alamein**, where the coastal road, crammed with fleeing German vehicles, came under the blasting attacks of the **Royal Air Force** while British convoys advanced nose to tail almost unmolested by the **Luftwaffe**— in vivid contrast to the early summer months of 1940, when German machines had swept over the roads of **France** and **Flanders** spreading death and destruction among the hordes of helpless refugees. And if the air operations from the **United Kingdom** were less spectacular, their consequences were to be no less enduring. Led by their pathfinders, the

bomber squadrons now penetrated to the industrial heart of **Germany** and reached over the Alps to attack her wavering ally. British fighters, no longer required to protect the fortress island against invasion, swept forward to attack the **German Air Force** over occupied territory, while **Coastal Command**, re-equipping and assured of its ability to kill, took up the challenge of the U-boats in the **Atlantic**.

This growing strength of the **Royal Air Force** derived from many sources. On the technical side much had been achieved by British science, industry, and productive skill. New machines and weapons of greater power and range had been produced and a vast array of scientific aids and devices invented and developed. The provision of a great army of well-trained aircrew had required intensive effort, in which the energetic development of the Empire Air Training Plan was of particular significance. Three years had now gone by since this scheme was born, and thousands of young men from every part, answering the call of the air, had passed through the training schools and reached the operational squadrons in the various theatres. A very great effort had been needed to develop the original plan and maintain this unending flow. On the broad plains of **Canada**, in **Australia**, South Africa and New Zealand, the airfields and large training establishments had been spread out, while the factories of **Britain** and the **United States** had provided a vast mass of training aircraft and equipment. Throughout these great movements of men and material, the instructors and ground crews, far removed from the excitement of battle, had faithfully performed arduous and monotonous duties. Upon them rested the ultimate responsibility of ensuring that the standard of flying training was maintained at a high and uniform level. By the end of 1942, when 69,000 aircrew had been trained in the Dominions, the scope of the original plan had been several times enlarged so that this great joint effort had already more than fulfilled the high hopes at its inception.

Now, as this flow of trained aircrew from the Commonwealth increased, men of the **United States Air Force** were also arriving in the **United Kingdom** to swell the tide of Allied air power rising against

Germany. Some were already in action flying from British bases on daylight bombing raids against occupied territory—attacks which were presently to extend to **Germany** itself. And so, after a year of struggle and toil in which the enemy's power seemed to have reached its peak, the Allied air forces, in great and gallant company, moved forward into 1943, and a long step onward to victory.

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Appendix I

PRINCIPAL EVENTS OF THE SECOND WORLD WAR 1939-42

(With particular reference to air operations in Europe)

1939

AUGUST

- 24 General mobilisation of **RAF** ordered.
Regular North Sea reconnaissance patrols by **Coastal Command** commenced.

SEPTEMBER

- 1 German forces invaded **Poland**.
2 First echelon (ten squadrons) of the Advanced Air Striking Force flew to **France**—the main body followed by sea on 10–11 September.
3 Great Britain, **Australia**, New Zealand and **France** declared war on **Germany**.
3–4 First leaflet operation flown by 10 **Whitleys** over **Hamburg**, **Bremen** and the Ruhr.
4 15 **Blenheims** and 14 **Wellingtons** attacked enemy warships off **Brunsbüttel** in the **Schillig Roads**.
5 **South Africa** entered the war. The first **RAF** attack on an enemy U-boat was made by an **Anson** of No. 500 Squadron near the **North Hinder Light Vessel**.
6 First enemy aircraft sorties over **England**—**Thames Estuary**.
9 **Hurricane Squadrons** Nos. 1, 73, 85 and 87 arrived in **France** as part of the **RAF Air Component**.
10 **Canada** declared war on **Germany**.
13 **New Zealand** waives claim to 30 **Wellington** bombers previously ordered and men of the **New Zealand Ferry Flight** in **England** placed at disposal of **RAF**.
29 **Germany** and **Russia** partitioned **Poland**.

OCTOBER

- 14 German U-boat enters Scapa Flow and sinks HM Battleship *Royal Oak*.
- 16 First German air raid on **Britain**. In the afternoon about 12 Ju88 and Do215 raided Firth of Forth. Two shot down into sea by fighters and one by AA.
- 28 First German aircraft of the war to be brought down on British soil was forced down near Dalkeith. (He111 on reconnaissance over the Firth of Forth.)
- 30 First German aircraft shot down over **France** by Hurricane of No. 1 Squadron.

NOVEMBER

- 4 'Cash and Carry' Law enacted in **USA**.
- 18 Germans began laying magnetic mines from the air off British coast.

DECEMBER

- 3 Attack by 24 Wellingtons on warships at Heligoland.
- 12 Eight Whitleys attacked seaplane bases at Borkum and Sylt from which enemy minelaying aircraft were reported to be operating. Nightly patrols over these bases were continued until mid-April 1940.
- 13 The first attack on enemy surface vessels by aircraft of Coastal Command, when a Hudson of No. 220 Squadron attacked two German destroyers in the North Sea, west of **Denmark**.
Battle of the **River Plate**— *Graf Spee* scuttled on 17 December.
- 17 Empire air training agreement signed at **Ottawa** on behalf of Governments of **United Kingdom, Canada, Australia** and New Zealand.
- 18 Wellingtons of Bomber Command made a daylight attack on shipping at **Wilhelmshaven**. 12 aircraft shot down by German fighters, believed to be the first occasion when radar was used by the enemy.
- 26 Establishment of first Australian squadron completed in England, for service with **Coastal Command** (No. 10 RAAF Squadron).

1940

JANUARY

- 8 The first successful minesweeping against enemy magnetic mines was carried out in the Thames Estuary by specially fitted Wellington aircraft of **Coastal Command**.
- 31 During January first Hudson and Sunderland aircraft of Coastal

Command had been fitted with airborne radar.

FEBRUARY

16 A Hudson of **Coastal Command** located the *Altmark* off the coast of **Norway**. HMS *Cossack* subsequently entered Josing Fiord, where a party boarded *Altmark* and rescued 299 prisoners.

25 First Canadian squadron (No. 110 RCAF) arrived in England.

MARCH

19 First British air attack on a land target. 30 Whitleys and 20 Hampdens attacked the seaplane base at Hornum, on the island of Sylt.

APRIL

1 Formation of No. 75 New Zealand Squadron at RAF Station, Feltwell in Norfolk. (First Commonwealth squadron in Bomber Command.)

9 **Germany** invaded **Denmark** and **Norway**.

11 First attack on a mainland target—six Wellingtons and two Blenheims attacked Stavanger airfield.

13–14 First minelaying operation by Bomber Command Hampdens off the coast of **Denmark**.

15–18 British forces landed at Aandalsnes and Molde in **Norway**.

22 Air Vice-Marshal K. R. Park appointed Air Officer Commanding No. 11 Group, Fighter Command.

24 18 Gladiators of No. 263 Squadron landed on the frozen Lake Lesjeskogen in **Norway**.

25 German air attack on Lesjeskogen airfield, 16 Gladiators destroyed.

29 Empire Air Training Scheme commenced in **Canada**, **Australia** and **New Zealand**.

30 Evacuation of British forces from Aandalsnes began.

MAY

1 **RAF** squadrons withdrawn from **Norway** to re-equip. Aandalsnes evacuation completed.

7 First 2000-pound bomb dropped by a **Coastal Command** Beaufort near a German cruiser off Norderney.

10 **Germany** invaded **Holland**, **Belgium** and **Luxembourg**. British and French forces moved into **Belgium** and **Holland**. German parachute troops seized Waalhaven, the airport of **Rotterdam**. Waalhaven was bombed by 9 Blenheims and 36 Wellingtons.

11 A new coalition Government was formed in **London** with Mr.

Churchill as Prime Minister and Minister of Defence.

12 Attack on bridges across the Albert Canal at Maastricht by five Battle aircraft of No. 12 Squadron. Four aircraft failed to return, one returned badly damaged. Flying Officer D. E. Garland and Sergeant T. Gray awarded the first air VCs of the war.

12-14 German breakthrough on French front at Sedan.

14 77 bombers of Advanced Air Striking Force made attacks on five pontoon bridges in the Sedan area. This was largest series of daylight attacks made by **RAF during the French Campaign (1940).**

15 **War Cabinet authorised bombing attacks on **Germany** east of the Rhine.**

15-16 First large-scale attack by Bomber Command on industrial targets in **Germany. 93 aircraft attacked oil targets and railway centres in the Ruhr.**

17 Formation of Ministry of Aircraft Production with Lord Beaverbrook as Minister.

MAY

21 No. 263 Gladiator Squadron returned to **Norway, flown off aircraft carriers *Glorious* and *Furious* to airfield at Bardufoss, near Narvik. Hurricanes of No. 46 Squadron arrived a few days later.**

**24 First Rhodesian Flying Training School opened.
First British industrial town (Middlesborough) attacked by **German Air Force**.**

26 Full-scale evacuation of British forces from **Dunkirk began.**

**26 MAY-4
JUNE**

Intensive air patrols maintained over Channel and **Dunkirk area. 189 German aircraft destroyed for loss of 99 British fighters.**

JUNE

4 **Dunkirk evacuation completed.**

5 Regular anti-invasion patrols instituted by **Coastal Command.**

7 Evacuation of remaining **RAF fighters from Narvik on the aircraft carrier *Glorious*.**

8 *Glorious* sunk off **Norway by the *Scharnhorst* and *Gneisenau*.**

10 **Italy declared war on Great Britain and **France**.
Canada declared war on **Italy**.**

11 **Australia, New Zealand and South Africa declared war on Italy.**
11-12 **36 Whitleys operating from England and refuelling in the Channel Islands despatched to make first raid on Italy. Nine aircraft attacked Fiat Works, Turin, and two aircraft attacked Ansaldo Works, Genoa.**

14 **Germans entered Paris.**

17 **Evacuation of last RAF squadrons from France completed.**

21 **France accepted German armistice terms.**

25 **Hostilities in France ended.**

JULY

2 **Hitler orders preparations for invasion of England; in further directive, 16 July, orders preparations to be completed by mid-August.**

4-5 **Hamburg, Bremen, Wilhelmshaven, Emden and Kiel attacked by Bomber Command.**

10 **Preliminary phase of the Battle of Britain began with German attacks on Channel convoys.**

15 **RAF begin attacks on shipping and barge concentrations in enemy North Sea and Channel ports. Attacks continue until end of October.**

23-24 **First British aircraft over Berlin. A Blenheim, which had failed to locate its target at Brandenburg, came out of the clouds over Berlin. The streets were lit and could be easily distinguished.**

AUGUST

8 **First phase of the Battle of Britain began (8-18 August) with intensive attacks on shipping and coastal towns.**

Air Training Scheme commenced in South Africa.

AUGUST

12-13 **Dortmund-Ems aqueduct breached by Hampdens in a low-level attack. Flight Lieutenant R. A. B. Learoyd awarded the VC.**

13 **Alder Tag (Eagle Day) commencement of Battle of Britain (German version).**

15 **Enemy air attacks extended from Newcastle to Weymouth with airfields as the principal objectives. This was the heaviest German attack during the Battle of Britain. German losses 76 aircraft, British losses 34. U-boats commenced attacking convoys in the north-west approaches on the surface by night.**

19 **Second phase of the Battle of Britain opened (19 August-6 September) during which enemy air attacks were largely concentrated on airfields.**

24–25 First bombs fell in central **London** during daylight. In the course of widespread night raids, **Birmingham**, **Bristol**, South Wales area and Liverpool were also attacked.

25–26 First night attack by **RAF** on **Berlin**: a power station and targets on the outskirts of the city were bombed. Retaliation for raids on **London**.

SEPTEMBER

- 3** Anglo-American Lease-Lend Agreement. Sea and air bases in **Newfoundland** and Bermuda leased free to **USA**. Fifty United States destroyers transferred to Great Britain. **Hitler** fixes D-day for invasion of **Britain** for 21 September; postponed on 17 September; concentrations of shipping to be dispersed in view of air attacks, 19 September.
- 7** Opening of third phase of Battle of **Britain** (7 September–5 October) during which **London** was the main objective.
- 7–8** Night ‘Blitz’ on **London** opened with heavy enemy attacks on **Thames-side**. Severe damage caused.
- 8** Invasion alert No. 1 in force. Major effort of Bomber Command concentrated against German invasion preparations.
- 15** The German Air Force delivered two major attacks on **London** during day; later, smaller formations attacked **Portland** and **Southampton**. 56 enemy aircraft destroyed.
- 19** Formation of the first RAF Eagle Squadron (No. 71 Squadron) which was manned by American volunteers.
- 23–24** Bomber Command attacked **Berlin** with 119 aircraft.
- 27** British Technical Mission arrived in **Washington** for mutual disclosures of British and American radar developments. British scientists demonstrated the Magnetron valve, which revolutionised microwave radar technique, to the Americans.

OCTOBER

- 6** Opening of the fourth and final stage of the Battle of **Britain** 6–31 October, during which daylight attacks gave way gradually to night raids.
- 25** ACM Sir Charles Portal appointed Chief of the Air Staff vice ACM Sir Cyril Newall, appointed Governor-General of New Zealand.

NOVEMBER

- 10–11** First air delivery of land planes across the **Atlantic**—seven Hudsons from **Canada**.
- 11** In attacks on convoys off the East Coast of Great Britain

Italian bombers and fighters operated for first time. 13 Italian

14-15 ~~Enemy aircraft carried out heavy attack on Coventry from dusk till dawn. Widespread damage caused.~~ ~~aircraft were destroyed without loss to RAF fighters.~~

16-17 Heaviest concentrated attack by Bomber Command to date. 131 aircraft on **Hamburg**.

DECEMBER

16-17 First 'area' attack on a German industrial target by Bomber Command—134 aircraft on **Mannheim**.

20 Two Spitfires of No. 66 Squadron inaugurated a new daylight fighter offensive by making the first low-level sorties against an airfield at Le Touquet.

21-22 First night 'Intruder' sorties made by No. 23 Squadron, to supplement 'Security patrols' by No. 2 Group.

29-30 About 130 enemy aircraft operated mainly against **London**. Feature of raid was large number of incendiary bombs dropped. 1470 fires reported, mainly in City, SE and E **London** area. The Guild Hall, eight Wren churches, and many famous buildings were destroyed or severely damaged.

1941

JANUARY

2 Heavy night raid on Cardiff, South Wales.

RAF attacked **Bremen**, repeated following night; Wilhelmshaven, nights 15 and 16 January.

6 An Italian U-boat sunk off the Hebrides by a Sunderland of No. 210 Squadron was first Italian submarine destroyed by **Coastal Command** aircraft.

9 First sweep of the new fighter offensive. Five squadrons of **RAF** fighters in two formations patrolled over and off the French coast.

10 First 'Circus' operation. Six Blenheims of No. 114 Squadron supported by nine squadrons of fighters attacked targets in the Forêt de Guines.

FEBRUARY

10-11 **RAF** Stirlings operated for the first time (**Rotterdam**).

19 Heavy German raid on Swansea; repeated following two nights.

24-25 **RAF** Manchesters operated for the first time (**Brest**).

MARCH

Targets for **RAF** bombers include **Berlin**, **Hamburg**, **Bremen** and **Dusseldorf**.

1 Heavy and repeated German night raids on **London**, **Portsmouth**, **Glasgow**, **Liverpool** and **Plymouth**. No. 485 New Zealand Fighter Squadron formed at **RAF Station Driffield**, **Yorkshire**.

MARCH

- 6 Battle of the **Atlantic** directive issued by the Prime Minister ordering that until further notice absolute priority was to be given to overcoming the U-boat and the Focke-Wulf aircraft.
- 11 Lease-lend Bill signed by President Roosevelt.
- 12–13 First attack by four-engined bombers of Bomber Command on **Germany**—Halifaxes against **Hamburg**.
- 30–31 Bomber Command opened its campaign against enemy warships (*Scharnhorst* and *Gneisenau*) at **Brest** which lasted over ten months.
- 31 First anti-U-boat squadron of Hudsons, No. 269 Squadron arrived in **Iceland**, followed four days later by Sunderlands of No. 204 Squadron.

APRIL

German night raids continue with three heavy attacks on **Bristol**, two on **Coventry**, two on **Portsmouth**, three on **Plymouth** and two on **London**.

Targets during this month include **Kiel** on four nights, **Brest** six nights, **Berlin** twice and **Mannheim**.

- 1 First 4000-pound bomb was dropped—on **Emden** by a Wellington of Bomber Command.
- 7–8 First offensive operation by Havocs (night intruder operations on French airfields).
- 19–20 Heaviest weight of bombs dropped on Great Britain by the **German Air Force** in any one night—1184 metric tons, of which 1174 tons fell in the **London** area.

MAY

- 1–7 **Liverpool** raided on seven consecutive nights, severe attacks on 2 and 3 May; **Clydeside** and **Hull** also each attacked on two nights.
- 8–9 Largest force of British bombers yet dispatched—359, mainly on **Hamburg** and **Bremen**. Further targets during this month include **Hamburg** (five nights), **Cologne** (four nights), **Brest** and **Bremen** (each three nights).
- 10–11 Very heavy raid on **London**; damage to House of Commons, Westminster Hall, Abbey and School. **RAF** fighters claimed 29 enemy aircraft destroyed. Last raid of the Blitz.

24 *Bismarck* and *Prinz Eugen* intercepted off Greenland. HMS *Hood* sunk. *Bismarck* damaged, but escaped with *Prinz Eugen*.

26 *Bismarck* located in **Atlantic** by Catalina aircraft of Coastal Command.

27 *Bismarck* sunk at 11 a.m. by torpedoes from *Dorsetshire*, after damage by torpedoes from **Fleet Air Arm** aircraft from *Ark Royal*.

MAY-JUNE

Battle of the **Atlantic**. Offensive patrols by **Coastal Command** help to drive U-boats from North-Western Approaches.

JUNE

7-8 Thirty-seven bombers despatched to attack the *Prinz Eugen* sheltering in **Brest**. Four further raids on **Brest** in following week.

11 **RAF** raids on Ruhr, Rhineland and ports in NW Germany; attacks continue for 20 consecutive nights.

13 The pocket battleship *Lutzow* attacked off SW Norway by Beauforts of **Coastal Command** and severely damaged by torpedoes.

14 Fighter sweeps now flown daily over Channel and northern **France**.

22 **Germany** invaded **Russia**.

24 First air delivery of aircraft from **America** to **West Africa** via the South Atlantic route.

JULY-OCT

Circus operations by Bomber and Fighter Commands intensified to divert enemy fighters from eastern theatre. **RAF** bombers operate in force on 18 nights against **Brest**, **Bremen**, **Hamburg** and targets in the Ruhr and Rhineland.

JULY

4 Successful low-level attack by 15 Blenheims in daylight on **Bremen**—VC awarded to leader, Wing Commander H. I. Edwards, of **Fremantle**, **Australia**.

20 Formation of **RAF Ferry Command** (ACM Sir F. Bowhill) which took over the work of Atlantic Ferry organisation

24 Daylight attack by **RAF** on the *Gneisenau* at **Brest** and the *Scharnhorst* at La Pallice. Sixteen bombers missing.

AUGUST

Bomber Command's night attacks include eight raids on targets

in the Ruhr, five against **Mannheim**, three on **Hanover** and **Frankfurt**, and two against **Karlsruhe**.

- 3 First enemy aircraft destroyed by a Hurricane operating from a fighter catapult ship.
- 5 First VC of the war to be awarded to a New Zealand airman—Sergeant J. A. Ward of No. 75 Squadron.
- 12 53 Blenheims (with strong fighter escort as far as Dutch coast) made a low-level attack on two power stations at **Cologne**. Deepest penetration to date in daylight attack from United Kingdom. About 1500 aircraft of Fighter Command operated during the day in support of these and other aircraft of Bomber Command which were engaged in operations diversionary to the main attack.
- No. 489 New Zealand Torpedo-Bomber Squadron formed at RAF Station Leuchars, **Scotland**.
- 27 A German U-boat operating in the **North Atlantic** surrendered to a Hudson aircraft of No. 269 Squadron Coastal Command.

SEPTEMBER

Principal targets for **RAF** night bombers are **Berlin**, **Cologne**, **Frankfurt**, **Hamburg** and St. Nazaire, each attacked on three missions. Turin and Genoa also raided on two nights.

- 1 No. 151 Wing RAF, equipped with Hurricanes and led by Wing Commander H. N. G. Isherwood, arrived at Murmansk, **Russia**, and was operational by 17 September.

OCTOBER

Fighter sweeps and circus operations over northern **France**, Channel and occupied territory are flown on 24 days.

Brest, **Cologne**, and **Bremen** are each attacked on four nights by Bomber Command.

No. 488 New Zealand Fighter Squadron formed at **RAF** Station Kallang, **Singapore**.

- 30 Hurricane bombers used in active operations for the first time over Western Europe.

NOVEMBER

- 7 **RAF** despatched 300 bombers against **Berlin**, **Cologne** and **Mannheim**. Substantial losses suffered by Bomber Command this night and by Fighter Command the following day lead to issue of orders to conserve aircraft. No further circus operations during 1941 and both fighter and bomber offensives continue on a reduced scale.
- 14 HMS *Ark Royal* sunk off Gibraltar after delivering aircraft

reinforcements to **Malta**.

- 29 No. 151 Wing, **RAF**, returned from **Russia** to **United Kingdom**. First German U-boat to be sunk by aircraft of Coastal Command unassisted by any other force was in the Bay of Biscay by a Whitley of No. 502 Squadron.

DECEMBER

- 7 **Japan** launched air attacks on US naval, military and air bases in **Hawaii**, including **Pearl Harbour**.
- 8 Great Britain and **United States** declared war on **Japan**.
- 9 **Canada**, **Australia**, New Zealand, South Africa declared war on **Japan**.
- 10 HMS *Prince of Wales* and *Repulse* sunk off Kuantan, **Malaya**, by Japanese aircraft.
- 11 **Germany** and **Italy** declared war on **United States**.

22 DEC-14
JAN

Anglo-American conference in **Washington**—Mr. Churchill, President Roosevelt, and Combined Chiefs of Staff.

1942

JANUARY

Main targets for **RAF** bombers in this and the following month are **Brest** and the German ports of **Emden**, **Bremen**, and **Hamburg**. Daylight offensive by fighters over the Channel ports and northern **France** is continued.

- 16 Formation of Combined Chiefs of Staff Committee in Washington.

FEBRUARY

- 12 The German warships *Scharnhorst*, *Gneisenau*, and *Prinz Eugen* escaped from **Brest** and proceeded up the Channel under attack by **Royal Navy** and **RAF**.
- 15 **Singapore** surrendered to Japanese forces.
- 20 Air Marshal Sir Arthur Harris appointed AOC-in-C Bomber Command.
- 22 Advanced detachment of US VIII Air Force arrived in England.
- 28 Twelve Whitley bombers (five captained by New Zealanders) dropped parachute troops at Bruneval to capture enemy radar apparatus.

MARCH

Circus operations resumed and daylight sweeps over northern

France intensified in order to hamper the build-up of German **Air Force** after losses suffered on Eastern Front during the winter. The offensive continues on a large scale until the **autumn**.

Bomber Command's principal targets this month are industrial centres in the Ruhr and in **France**.

- 3 No. 486 New Zealand Fighter Squadron formed at **RAF** Station Kirton-in-Lindsey, Lincolnshire.
- 3-4 Bomber Command attacked the Renault Factory at Billancourt near **Paris**.
- 8 Daylight attack on Matford Works at Poissy, near **Paris**, by Bostons of Bomber Command, under cover of diversionary operations.
- 8-9 'Gee' first employed by Bomber Command—target **Essen**. Gee had actually been used operationally in July 1941, but to prevent enemy 'jamming' it was not used again until sufficient aircraft were equipped to operate in strength.
- 10-11 First bombing mission by Lancasters of Bomber Command—target **Essen**. These aircraft had been used on 3-4 March for minelaying.
- 28 Successful incendiary raid on Baltic port of **Lubeck** by **RAF** bombers.

APRIL

- 7-8 Peak of enemy air attacks on **Malta**.
- 10-11 First 8000-pound bomb dropped by Bomber Command— **Essen**
- 14 HM Government accepted US proposals to make the invasion of NW Europe the major contribution of the Western Allies to the defeat of **Germany**.
- 17 Daylight raid by Bomber Command Lancasters on MAN Factory at **Augsburg**—12 aircraft despatched, 8 aircraft attacked, 7 missing. The leader, Squadron Leader J. D. Nettleton of Natal, South Africa, was awarded the VC.
- 23-24 First of a series of enemy retaliation raids (Baedeker raids) on British cathedral cities—Exeter, Bath, Norwich and **York** are attacked on following nights.

APRIL-MAY

Heavier night raids by Bomber Command against the Ruhr and Rhineland, **Hamburg**, **Rostock** and targets in occupied territory, including the ports of Le Havre, **Lorient** and St. Nazaire.

MAY

Enemy night raids continue intermittently with attacks on

12 ~~Exeter, Hull, Canterbury and South Coast towns.~~
First main contingent of US VIII Air Force arrived in Great Britain.

30-31 First RAF 'thousand-bomber' raid (**Cologne**). 1047 aircraft took part. 44 lost, over 2000 tons of bombs dropped in 90 minutes. Operational Training Units first employed on a bombing raid and Mosquito bombers operated for first time.

JUNE

1-2 Second RAF thousand-bomber raid (**Essen**). 1006 aircraft took part, 35 lost, over 1380 tons of bombs dropped in 90 minutes. Other targets attacked this month are **Bremen**, **Emden**, the Ruhr and enemy-occupied ports. **Bremen** is the target for the third thousand-bomber raid on 25th.

3-4 The first sortie and attack on a U-boat, using a Leigh Light, was made by a Wellington of No. 172 Squadron, **Coastal Command**.

5 Extended Empire Air Training agreement signed in **Ottawa** by **United Kingdom**, **Canada**, **New Zealand** and **Australia**.

12 A Coastal Command Beaufighter flying low over **Paris** dropped a Tricolour flag near the tomb of the Unknown Soldier.

18-26 Mr. Churchill visited **Washington** for conferences with President Roosevelt on operations for 1942 and 1943.

25 No. 488 New Zealand Night Fighter Squadron formed at **RAF Station Church Fenton**, **Yorkshire**.

JULY

2-4 German Forces advancing into Egypt halted at **El Alamein**.

4 US VIII Air Force crews operated in six Bomber Command Bostons for first time, in daylight raid on Dutch airfields.

6 The first U-boat sunk at night by **Coastal Command** aircraft (Leigh Light Wellington of No. 172 Squadron).

JUL-AUG

German daylight 'tip and run' raids by fighter-bombers on south coast towns become more frequent and continue until mid-1943. Bomber Command continues to attack German and French ports, communication centres and industrial targets in the Ruhr. Heavier casualties over **Germany** as enemy defences improve.

AUGUST

15 Formation of **Pathfinder Force** under command of Group Captain D. C. T. Bennett.

No. 487 New Zealand Squadron (Light Bombers) commenced forming at RAF Station Feltwell, Norfolk.

AUGUST

17 US VIII Air Force aircraft operated for first time. Objective Rouen railway centre (12 Fortress aircraft escorted by **RAF Spitfires**).

18–19 **Pathfinder Force** carried out its first operation (Flensburg).

19 Combined operation against Dieppe. Fighter Command engages in major battle with the **German Air Force**.

26 Battle for **Stalingrad** began.

SEP–OCT

In Battle of the **Atlantic** aircraft of **Coastal Command** destroy ten U-boats (four sunk by long-range Liberators). **RAF** bombers make 17 major night raids on targets in **Germany**.

During last week of October, heavy raids on northern **Italy** (Genoa, Turin and Milan); minelaying in entrances to Biscay U-boat bases intensified as West African convoys sail.

OCTOBER

23 **Eighth Army** offensive opened on the Egyptian Front (**El Alamein**).

NOVEMBER

8 Allied Forces landed in French North Africa under the command of Lieutenant-General Eisenhower.

11 Admiral Darlan ordered cease-fire of French forces in North **Africa**.

19 Russians took the offensive in **Stalingrad** battle.

20 **Benghazi** captured by British forces.

NOV–DEC

Bomber Command attacks **Italy** on 18 nights, main targets being Genoa, Turin and **Naples**. Objectives in **Germany** include **Hamburg, Stuttgart** (November); **Frankfurt, Karlsruhe, Duisberg** and **Munich** (December).

DECEMBER

6 Daylight attack by **RAF** light bombers on Philips Works at **Eindhoven**.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

APPENDIX II – A FLIGHT TO ITALY IN 1940

Appendix II

A FLIGHT TO ITALY IN 1940

(The following account concerns the experiences of the crew of a Whitley bomber of No. 77 Squadron detailed to attack Turin on the night of 5 November 1940. It is written by Wing Commander H. H. J. MILLER, OBE, DFC, AFC, then a pilot officer and captain of the aircraft.)

On the morning of 5 November we found our target for that night was to be in **Italy**. As our squadron was stationed at Topcliffe, in **Yorkshire**, this meant gathering all our gear together, loading up with petrol and bombs, taking off from Topcliffe just after lunch and flying south to Newmarket where we landed beside the racecourse. There we parked our Whitleys so they could be checked over and the fuel tanks topped up while we had a meal and were briefed for the attack on Turin, as the target turned out to be.

We eventually took off just after dark—at 7 p.m. exactly—and, after passing out over the English coast through a corridor in our defences, headed for the French coast. There were lots of our searchlights waving about looking for enemy raiders and quite a bit of anti-aircraft fire engaging raiders as they came in over the coast. We could not help thinking how easy it was for them—a 250 mile round trip from their aerodromes in the Low Countries and **France**, compared with our effort for that night—we were facing a round trip of over 1,300 miles. The Germans were able to carry minimum petrol and maximum bombs and we were in the reverse position.

Our first spot of trouble arose over the French coast, where we were coned in searchlights and some flak rattled on the underside of the plane like hail. Fortunately no serious damage resulted and after violent evasive action we drew safely out of range and steadied on course once

more.

The weather soon deteriorated alarmingly. We ran into thick cloud charged with static electricity which played and flamed all over the aircraft turning the airscrews into catherine wheels and giving the appearance of someone playing a gigantic purple hose over all the leading edges. The front turret was a mass of flame and the whole effect most unsettling though not really dangerous. The weather worsened and as we climbed steadily the cloud became thicker and more and more turbulent. Suddenly we were struck by lightning which blinded us all for a few moments. The wireless operator reported that the lightning had burned away our aerial and that blue flames had passed through the valves in the set and burned them out. Repairs were out of the question and from then on we must rely on dead reckoning. I hoped that sooner or later we would come out above the clouds and that the Swiss Alps would be clear enough to give us our position as we passed over one of the peaks or that we should see Lake Geneva or one of the well lighted Swiss towns. The immediate problem was to get above the cloud or, failing that, to get high enough to be sure of crossing the Alps in safety. As the highest peaks are about 15,000 feet and we had no means of checking our exact position we had to get high enough to be able to clear them should they happen to be on our track. Our problems were further increased by the fact that we were now experiencing severe icing. The temperature was about -10° C. and all the windscreens were well frosted over. Chunks of ice began flying off the propellers and hitting the metal fuselage with resounding crashes. The starboard engine coughed and cut out, due to carburettor icing, but recovered when 'warm air' was selected. Mainplane and propellor de-icers were turned on and we kept climbing as well as we could.

The poor old aircraft was labouring badly. She was carrying a heavy load—bombs, petrol and now a weight of ice which seemed to be the last straw. We painfully reached 13,000 feet, still in cloud, with the temperature down to -20° c., but the accumulation of ice ceasing. It seemed a pity to turn back at that stage. There was only one thing left

to do—to increase engine revs. to maximum. This meant overheating, with serious risk of seizing up, bursting the radiators and certainly increasing petrol consumption beyond all bounds. It had to be risked, and I shoved the airscrews into fine pitch. We immediately began to gain height, but after climbing a couple of hundred feet the oil and coolant gauges had gone past the danger mark and I had to reduce revs. again, try to hold height and let her cool off. By repeating this process half a dozen times we eventually staggered up to 14,000 feet and broke out into brilliant starlight. There were masses of cloud about still towering above us but as far as we could see no peaks lay ahead and we carried on. As we flew over the Alps, the cloud broke a bit and we saw what we took to be lights of Geneva away to our left. We had not done so badly—we were at least somewhere near on track.

Making an alteration of course to take us to our target we began dropping down to get below the cloud which had thickened up again on the Italian side. By the time we were due over Turin we were down to 8000 feet but still in cloud. As we drew nearer searchlights sprang up and it was obvious that we were at least over some fairly well defended locality—we hoped Turin. Very conscious of the petrol expended in our struggle to get over the Alps, I did not feel justified in dropping much lower or in spending much time in target identification. So though we could not see the ground and had no means of definitely identifying our target, I ran into the middle of the searchlight concentration and the bomb aimer released the bombs. Their bursting produced a fine display of anti-aircraft fire.

With the bomb load gone and petrol half used the Whitley climbed like a lift and in no time at all we were clear of trouble and making height quickly through the cloud to pass back over the Alps. The weather seemed to be getting worse and this time we did not get out of cloud as we crossed. The temperature was very low and we did not experience any icing until we began to descend. All members of the crew were frozen stiff by this time. The heating system had long since given up the ghost and the temperature inside the aircraft was well below zero.

The rear gunner, stuck in his turret far away in the tail, asked permission to come forward and thaw out and to have something to eat. He found, however, that he was so stiff that he could not get out of the turret and when he attempted to reek a piece of chocolate it was frozen so hard that even banging it on the guns would not shatter it.

The wireless operator had nothing to do as his set was useless and the navigator, after working out a probable time of reaching the French coast, could do no more as he lacked any information to work with. No radio bearings or fixes, no hint of wind speed or direction, no sight of ground— nothing that could give him any real confidence in his calculations. Our situation was rather like that of a blindfolded man trying to row straight across a fast flowing stream. We could but set a hopeful compass course and trust to luck!

Once certain that we must have crossed the Alps on the way home, I handed over the controls to the second pilot. Now was our chance to save petrol —long steady descent straight for the northern coast of **France**. Revs. right down, mixture weak, throttle open just enough to give the correct rate of descent. But now our problem was to keep the motors warm—we were reaching the zone of severe icing again. Again the dread crash of the ice flying off the airscrews, again the build up on windcreens, mainplanes, etc., and the horrible soggy feeling of the controls that feel as though they won't continue to control much longer.

Time slipped by, and although we kept dropping steadily down and down, still the cloud remained solid and unrelenting. It was imperative that we get some sight of the ground, that we pick up some landmark—a river, a lake, the sea coast, something that we could identify and so fix our position. We might be, by this time, a hundred miles off our course, missing England and heading out into the **Atlantic** or possibly the other way into the North Sea. We *must* find out when we crossed the coast of **France** and we must find out where.

So down, down we went. I began to worry about hitting high ground.

The navigator checked his maps and assured me that there was nothing over 1000 feet or so anywhere near our track. But were we anywhere near our estimated track? The risk had to be taken and as we approached our estimated time of crossing the coast we dropped down and down until at last we broke cloud at 1400 feet.

The night was as black as ink and we could see nothing. The heavy cloud cut off all light from the moon and it was impossible to tell whether land or sea was beneath us. What about dropping a flare? Not so easy—they were fused to fall 1500 feet and be well clear of the aircraft before igniting. And so we climbed back into the clouds—up to 2000 feet in grey clammy fog—so that the wireless operator could release a flare. And then a quick dive down again to get below the cloud before the flare burned out and deprived us of our glimpse of what lay below. A nerve-racking business. The first flare was a failure—not enough height—it was out before we got below cloud again. The second one showed us land—open fields. We had not yet crossed the coast. Wait 15 minutes then drop another. Still land. Wait 15 minutes—drop again. Still land. For the first time our hearts really sank. We knew that if all had gone according to plan we should have been well over England and nearing our landing field by now. Here it was 5 a.m. and still somewhere over **France**. On and on. At 5.30 drop another flare and see water. Turn back, eyes straining to catch the coastline and glimpse some bay, some promontory, some island to give a clue to our whereabouts. There it is, the white surf faintly seen in the darkness. Drop our last flare—it is an island—quite a large, flat piece of land—and then darkness again as the flare dies out.

The question was which Islands were they? Identification was impossible as we had no more flares, and we dare not wait till dawn. Petrol was dangerously low already and enemy fighters would be up with the daylight. We could not believe that we could be so far off course as the Dutch Islands so assumed that it was one of the **Channel Islands** we had seen and I headed the aircraft north. About 6 a.m. came the dawn and with it the sight of a grey angry sea. No land in sight, not a ship, not a bird—not a living thing to be seen. We were now flying at about 700

feet—below the cloud and low enough to see very clearly the long rollers and the wind whipping the white horses. We all knew only too well what was likely to be our fate if we came down on a sea like that. If we were lucky enough to get out of the aircraft and into our little rubber dinghy not a soul would know we were there or would even think of looking for us. We would be assumed lost over the target or on the way there as our last contact with the outside world had been when we had taken off from Newmarket 11 hours before. We all sat and thought our own thoughts and searched the horizon for something— anything to relieve the grim prospects of the sea below. We all knew that petrol must give out at 6.30. Normal endurance was about 10^o hours and we had carried overload tanks to give us an extra hour's flying. I knew that I had thrashed the engines in getting over the Alps, and I knew that petrol consumption must have been above normal. We all understood that 6.30 was about our limit. We had time to work out what we were going to do if we had to come down—we went over and over the drill. Everything was ready. The rear gunner came out of his turret and chopped away the exit door through which the dinghy would have to be launched. Everyone took up his ditching station and stood by waiting for that cough of the engines which would be the signal that we had come to the end—because we knew that would be the end! Time ticked by and look as we might there was no sign of the white cliffs of **Dover**—or anything whatsoever. A low sea mist had developed and visibility was not more than half a mile at the most. I had been worrying about our identification of the Island.

Once again the navigator and I studied the maps and in the face of the non-appearance of signs of land, I felt sure that we had made a mistake and should indeed have been on a Westerly course. The navigator could not agree and contended that a strong head wind was holding us back. I suggested compromise—steer NW which would mean that we must still hit England from the **Channel Islands** but which would also mean that if it had been the Dutch Islands we would be getting nearer to England instead of heading straight up the North Sea.

So we turned NW and still the motors ran sweetly. As our zero hour

approached, I took over from the second pilot and got him to strap me in as tightly as he could. Then I had him go through the whole plane and throw everything moveable overboard to lighten the ship. Over went ammunition, guns, oxygen cylinders, etc. Fortunately the intercom. still worked and all members of the crew were linked and could be kept informed of what was happening. Having done everything we could think of to bring us nearer to England, and give us some chance of getting out of the aircraft when we came down in the sea, we then were forced to sit back and wait and think.

6.30 came and went and still the motors purred. Every minute a mile and a half nearer home. Just before 7 a.m. one motor coughed. As a last desperate chance I switched the petrol cock back to a tank long since emptied and strangely enough the motor picked up its beat again.

The clock slowly ticked on on my dashboard and at 20 to eight we were still flying and the engines sounded the sweetest music I had ever heard. Our luck seemed fantastic, but since 6 o'clock we had expected to sight land at any moment, and as the hour passed by and then forty minutes more and still nothing was to be seen but unbroken sea, I came to the regrettable conclusion that we had somehow missed England and were now well out in the [Atlantic](#).

We were all dead tired—we'd been on the go for over 24 hours, with all the nervous tension involved—the preparations at Topcliffe, the take-off and landing at a strange aerodrome with full bomb and petrol load—a strain only a pilot appreciates—the take-off again on our present flight and all the troubles that had befallen us—the eleven hours of intense concentration— flying blind in the worst of conditions, the worry of knowing we were lost and finally the tension of the last two hours each minute of which we had expected to be our last.

With the remark, 'Well, we might as well get as close as we can to old England before we go down', I banked the plane and began to turn. Hardly had we begun to change direction when the gunner standing by the rear door with his hand on the dinghy shouted 'A ship! A ship!' It

seemed utterly unbelievable and we thought his brain had snapped under the tension. The rest of us strained our eyes and saw nothing. The gunner was sure. I continued the turn and then, coming into view from beneath the port wing, we all saw it, a couple of miles away; a tiny trawler—all by itself in a vast expanse of sea. It took not two seconds for me to make up my mind what to do. 'Standby to ditch—gunner OK, wireless operator OK, navigator OK, second pilot OK.' Fired off Very lights to identify ourselves as British as we swung round the trawler and then with motors still purring smoothly, a long slow descent planned to make a landing as near the ship as possible. We might have five seconds to get out of the plane before she sank—we might have five minutes—depending on what sort of landing we made. Very often no one got out and we knew that only too well. Would our luck hold or would the motors cut now, just when our salvation was in sight. Down and down till we are skimming the waves—big rollers 8 or 10 feet high—hold her off and keep the nose up—fatal if we go in nose first. Stick back—close throttles gently—'Brace brace' to crew—a gentle shudder as the tail wheel hits the top of a wave then 'Crash!' and a green wall of water overwhelms us. I am the only one left in the fore part of the plane as the rest of the crew are all at ditching stations aft. My way of escape is through a hatch directly above my head. Fortunately that had been kept closed, after much deliberation as it was liable to jam with the crash, otherwise I would have been drowned as the water rushed over us. I never thought to see the light of day again, but slowly the green mass seemed to grow whiter and lighter and suddenly I could see the surface of the water. I whipped out the quick release pin of my safety belt, burst open the hatch and was out on top of the fuselage. By the time I got down to the rear door, the dinghy had inflated and the crew were just climbing in, the navigator and the wireless operator clutching various maps and charts and secret and confidential documents. The plane was settling in the water and I stepped from the top of fuselage straight into the dinghy which was carefully being kept from touching the broken and torn wing flaps which had taken the first shock of the landing. A graze against a jagged bit of metal and we should all be struggling in the sea. The crew were pretty efficient and I stepped into the dinghy without

even getting my feet wet. We seized paddles and quickly moved clear in case we should be dragged under as the aircraft sank. The waves were a little alarming at first until we trimmed ship—a round rubber ring with a canvas floor, but she rode remarkably well. We looked for our trawler. As we reached the crest of a wave there she was—just weighing anchor and beginning to move towards us. She eventually hove to to leeward of us and let us drift down to her. Soon we were close enough to catch a line and then the problem was to get on board. The sea was so rough that at one moment the boat's rail was level with us and the next moment we were looking up ten feet or so at the trawler's crew who were leaning over the side. The trawler was rolling heavily and the whole thing was pretty tricky. Each time she rolled and we coincided with the gunwale one of us was grabbed by strong arms and heaved on board as the dinghy disappeared from sight again. At last we were all aboard, including the dinghy, and heading for port.

Never has a skipper's hand been shaken more fervently. We could hardly express our thanks we were so overwrought.

And where were we? Four miles off the NE coast of England. The trawler was, in fact, a Naval minefield patrol boat and had been anchored on the outside edge of the coastal minefield which gave protection from enemy surface raiders to our convoys as they moved between it and the coast. The minefield was a magnetic one and had we landed a couple of hundred yards nearer the coast we would almost certainly have blown ourselves up. Had that not happened, the boat would not have been able to come into the minefield to pick us up. The trawler captain and crew were marvellous to us and wirelessly the glad news to their shore station. We were met on the quay by an **RAF** car from the local fighter station and taken out there to await transport back to Topcliffe.

And so we completed our round trip.

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

APPENDIX III – STRENGTHS AND CASUALTIES

Appendix III

STRENGTHS AND CASUALTIES

**NEW ZEALANDERS WITH THE (including RNZAF
attached and New Zealanders in RAF)**

Casualties

	<i>Strength</i>	<i>Killed</i>	<i>PW</i>	<i>TOTAL</i>
Dec 1940	1,650	203	40	243
Dec 1941	5,085	1,497	312	1,809
Dec 1942	5,085	1,497	312	1,809

NEW ZEALANDERS WITH THE ROYAL AIR FORCE (VOL. I)

APPENDIX IV – PRINCIPAL BRITISH AND GERMAN OPERATIONAL AIRCRAFT (1939-42)

Appendix IV

PRINCIPAL BRITISH AND GERMAN OPERATIONAL AIRCRAFT (1939-42)

NB: The performance figures given below are those achieved in still air. It should also be remembered that most aircraft were modified in various ways and adapted for special tasks, when their performances varied considerably from those shown.

RAF BOMBERS

Aircraft Type	Normal Cruising Speed	Radius of Action with Associated Bomb Load	Typical Bomb Load	Armament
BATTLE I	148 m.p.h. at 15,000 ft	525 miles with 1000 lb.	Two 500 lb. or Four 250 lb.	Two .303 in
BLLENHEIM IV	180 m.p.h. at 15,000 feet	730 miles with 1000 lb.	Four 250 lb.	Five .303 m
BOSTON III	200 m.p.h. at 15,000 feet	500 miles with 2000 lb.	Four 500 lb. or Two 1000 lb.	Eight .303 in
	190 m.p.h. at 15,000 feet	900 miles with 6750 lb. or 425 miles with 13,000 lb.	Two 2000 lb. Six 1000 lb. and six 500 lb.	Eight .303 in
HALIFAX II	195 m.p.h.	950 miles with 3000 lb. or 250	Two 2000 lb. and six 1000 lb.	Eight .303 in

at
15,000
feet

miles with 13,000
lb.

HAMPDEN I

155
m.p.h.
at
15,000
feet

950 miles with
2000 lb. or 600
miles with 4000
lb.

Two 2000 lb

Six .303
in

**LANCASTER
I**

200
m.p.h.
at
15,000
feet

1200 miles with
2500 lb. or 325
miles with 12,750
lb.

Six 2000 lb. and three
250 lb. or One 4000 lb.

Eight
.303 in

185
m.p.h.
at
15,000
feet

800 miles with
8000 lb. or 600
miles with 10,000
lb

Four 2000 lb. and two
500 lb.

Twelve-
303 in

**MOSQUITO
IV**

265
m.p.h.
at
15,000
feet

800 miles with
2000 lb. or 725
miles with 4000
lb

Four 250 lb. or Two 500 Nil
lb.

200
m.p.h.
at
15,000
feet

1025 miles with
3500 lb. or 370
miles with 14,000
lb.

Seven 2000 lb. or
Twenty-four 250 lb.

Eight
.303 in

**STIRLING
III**

200
m.p.h.
at
15,000
feet

1000 miles with
3500 lb. or 300
miles with 14,000
lb.

Seven 2000 lb. or
Eighteen 500 lb.

Eight
.303 in

VENTURA I

200
m.p.h.
at
16,000
feet

500 miles with
2500 lb.

Four 250 lb. and three
500 lb.

Six .303
in and
two .50 in

**WELLINGTON
IC**

165
m.p.h.
at
10,000

1200 miles with
1000 lb. or 600
miles with 4500
lb.

One 1000 lb., four 500
lb. and one 250 lb. or
Six 500 lb. and one 250
lb.

Six .303
in

	feet			
WELLINGTON III	175 m.p.h. at 15,000 feet	1100 miles with 1500 lb. or 750 miles with 4500 lb.	One 4000 lb. or One 1000 lb., six 500 lb. and three 250 lb.	Six-303 in
WHITLEY V	150 m.p.h. at 15,000 feet	825 miles with 3000 lb. or 240 miles with 7000 lb.	Two 2000 lb. and two 250 lb.	Five .303 in

RAF FIGHTERS AND FIGHTER-BOMBERS

Aircraft Type	Maximum Speed	Service Ceiling	Rate of Climb	Armament
BEAUFIGHTER I-F	324 m.p.h. at 11,750 feet	27,000 feet	9.4 minutes to 15,000 feet	Four 20mm Six .303 in
BEAUFIGHTER VI-F	333 m.p.h. at 15,600 feet	24,500 feet	7-8 minutes to 15,000 feet	Four 20mm Six .303 in
BLenheim IV-F	260 m.p.h. at 12,000 feet	26,500 feet	10 minutes to 15,000 feet	Seven .303 in
GLADIATOR	245 m.p.h. at 15,000 feet	32,500 feet	7 minutes to 15,000 feet	Four .303 in
HURRICANE I	316 m.p.h. at 17,500 feet	33,200 feet	6-3 minutes to 15,000 feet	Eight-303 in
HURRICANE II A	342 m.p.h. at 22,000 feet	37,000 feet	8-2 minutes to 20,000 feet	Eight-303 in
HURRICANE IIB	342 m.p.h. at 22,000 feet	36,500 feet	8-4 minutes to 20,000 feet	Twelve-303 in (Two 250 lb. bombs)
HURRICANE IIC	342 m.p.h. at 22,000 feet	35,600 feet	9-1 minutes to 20,000 feet	Four 20mm
MOSQUITO II	370 m.p.h. at 14,000 feet	35,000 feet	7 minutes to 15,000 feet	Four 20mm Four .303 in
SPITFIRE I	355 m.p.h. at 18,000 feet	34,000 feet	6-2 minutes to 15,000 feet	Eight-303 in
SPITFIRE V-B	375 m.p.h. at 13,000 feet	36,000 feet	7-5 minutes to 20,000 feet	Two 20 mm Four-303 in
SPITFIRE IX	408 m.p.h. at 25,000 feet	43,000 feet	6-7 minutes to 20,000 feet	Two 20mm Four 03 in
TYPHOON I-B	405 m.p.h. at 18,000 feet	33,000 feet	6-2 minutes to 15,000 feet	Four 20mm

RAF COASTAL COMMAND

Aircraft Type	Cruising Speed and Endurance	Associated Bomb or Depth-charge Load	Armament
ANSON I	103 knots-5 1/2 hours	200 Ib.	Four .303 in
BEAUFORT I	150 knots-6 hours	1500 Ib. or one 18 in torpedo	Four .303 in
CATALINA I (FB)	150 knots-6 hours 100 knots-17 1/2 hours or 25 hours	2000 Ib. nil	Six .303 in
FORTRESS II	140 knots-10 3/4 hours	1750 Ib.	Six .30 in
HAMPDEN	120 knots-7 1/4 hours	One 18 in torpedo or 1500 Ib.	Six .303 in
HUDSON I	125 knots-6 hours	750 Ib.	Seven .303 in
HUDSON VI	140 knots-7 hours	1000 Ib.	Seven .303 in
LIBERATOR I	150 knots-16 hours	2000 Ib.	Four 20mm Six .30
SUNDERLAND I (FB)	115 knots-12 hours	2000 Ib.	Seven .303 in
SUNDERLAND II (FB)	110 knots-11 1/2 hours	2000 Ib.	Seven .303 in
WELLINGTON IC	125 knots-10 1/2 hours	1500 Ib.	Six .303 in
WELLINGTON VIII (LEIGH LIGHT)	120 knots-8 3/4 hours	1000 Ib.	Six .303 in
WHITLEY V	110 knots-9 hours	1500 Ib.	Five .303 in
VILDEBEESTE IV	82 knots-4 1/4 hours	One 18 in torpedo or 1000 Ib.	Two .303 in

GERMAN BOMBER AND RECONNAISSANCE AIRCRAFT

Aircraft Type and Mark	Normal Cruising Speed	Radius of Action with Associated Bomb Load	Typical Bomb Load	Armament
DORNIER 17	215 m.p.h.	450 miles with 2200 Ib.	Two 550 Ib. or Twenty 110 Ib	Seven 7.9 mm One 20 mm

at
15,000
feet

DORNIER 215

235
m.p.h.
at
15,000
feet

450 miles with 2200 Ib. Two 550 Ib. or Seven 7.9 mm
Twenty 110 Ib. One 20 mm

DORNIER 217E

240
m.p.h.
at
15,000
feet

585 miles with 4400 Ib. Four 1100 Ib. Four 7.9 mm
or Two 2200 Ib. Four 13 mm
and four 110 Ib. One 15 mm

**Focke-Wulf
200 (CONDOR)**

210
m.p.h.
at
16,000
feet

1350 miles on recce without bombs or Three 1100 Ib. Three 15.20
1075 miles with or Five 550 Ib. mm and
3600 Ib. Three 13 mm

HEINKEL III

210
m.p.h.
at
17,000
feet

760 miles with 2200 Ib. Four 550 Ib. Seven 7.9 mm
Two 20 mm

**Heinkel
115 (Float
Plane)**

160
m.p.h.
at
10,000
feet

800 miles with 1100 Ib. One 1100 Ib. or Four 7.9 mm
One 1650 Ib. One 15 mm
torpedo or One
mine

JUNKERS 87B

200
m.p.h.
at
15,000
feet

180 miles with 1100 Ib. One 1100 Ib. or Three 7.9 mm
One 550 Ib. and four 110 Ib.

JUNKERS 88-A4

255
m.p.h.
at
16,400
feet

640 miles with 4400 Ib. Four 1100 Ib. Seven 7.9 mm
and ten 154 Ib. One 20 mm

JUNKERS 88-B3

277
m.p.h.
at
18,000

640 miles with 2200 Ib. Four 550 Ib. or Six 7.9 mm
Four 550 Ib. or Two 7'9
and ten 154 Ib. mm and Two
13 mm

feet

MESSERSCHMITT 275 **450 miles with 2640** **Two 1100 Ib.** **Six 7.9 mm**
110 **m.p.h. Ib.** **and four 110 Ib. Two 20 mm**
at
18,000
feet

Note: With the exception of the four-engined FW200 all the above were twin-engined aircraft.

GERMAN FIGHTERS

Aircraft Type and Mark	Maximum Speed	Service Ceiling	Rate of Climb	Armament
Focke-Wulf 190	385 m.p.h. at 19,000 feet	36,000 feet	6.5 minutes to 18,000 feet	Two 7.9 mm Four 20 mm
Junkers 88C-6	295 m.p.h. at 14,000 feet	24,200 feet	13.8 minutes to 16,500 feet	Seven 7.9 mm Three 20 mm
Messerschmitt 109E	355 m.p.h. at 18,000 feet	35,000 feet	6.2 minutes to 16,500 feet	Two 7.9 mm Two 20 mm
Messerschmitt 109F	395 m.p.h. at 22,000 feet	36,500 feet	5.75 minutes to 17,000 feet	Two 7.9 mm Three 20 mm
Messerschmitt 109G	400 m.p.h. at 22,000 feet	38,500 feet	6 minutes to 19,000 feet	Two 7.9/13 mm Three 20 mm
Messerschmitt 110	60 m.p.h. at 20,000 feet	34,000 feet	8.5 minutes to 18,000 feet	Six 7.9 mm Two 20 mm

Note: Ju88 and Me10 were twin-engined.

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GLOSSARY OF ABBREVIATIONS

Glossary of Abbreviations

AACU	Anti-aircraft Co-operation Unit
AC-in-C	Air Commander-in-Chief
ACMB	Aircrew Medical Board
ACSEA	Air Command South-East Asia
AEAF	Allied Expeditionary Air Force
AFC	Air Force Cross
AGS	Air Gunnery School
AHQ	Air Headquarters
AOC	Air Officer Commanding
AOC-in-C	Air Officer Commanding-in-Chief
ATS	Air Training School
BAFO	British Air Forces of Occupation
BEF	British Expeditionary Force
Bel	Belgium
BEM	British Empire Medal
BOAC	British Overseas Airways Corporation
Bra	Brazil
BR	Bomber Reconnaissance
CAS	Chief of Air Staff
CB	Companion of the Bath
CBE	Commander Order of the British Empire
CFI	Chief Flying Instructor
CGI	Chief Ground Instructor
CGM	Conspicuous Gallantry Medal
CI	Chief Instructor
CMB	Central Medical Board
CME	Central Medical Establishment
CMG	Companion of St. Michael and St. George
CNI	Chief Navigation Instructor
CO	Commanding Officer
CTO	Chief Technical Officer

DCAS	Deputy Chief of Air Staff
DDI	Deputy Director of Intelligence
DD of Plans	Deputy Director of Plans
DFC	Distinguished Flying Cross
DFM	Distinguished Flying Medal
DFT	Director of Flying Training
DGE	Directorate General Equipment
DGMS	Directorate General Medical Services
DG of P	Directorate General of Personnel
D of AA	Director of Air Armament
D of AT	Directorate of Air Tactics
D of Ops	Director of Operations
D of P	Director of Personnel
D of Policy	Directorate of Policy
DPMO	Deputy Principal Medical Officer
DSO	Companion of the Distinguished Service Order
EFTS	Elementary Flying Training School
Eg	Egypt
Eth	Ethiopia
FPMO	Flying Personnel Medical Officer
FTC	Flying Training Command
FTS	Flying Training School
Fr	France
GCB	Knight Grand Cross of the Bath
GCIE	Knight Grand Commander of the Indian Empire
GCSI	Knight Grand Commander of the Star of India
GCVO	Knight Grand Cross of Royal Victorian Order
GHQ	General Headquarters
GM	George Medal
GOC-in-C	General Officer Commanding-in-Chief
Gr	Greece
GR	General Reconnaissance
Hoi	Holland
It	Italy
KBE	Knight Commander Order of the British Empire
KCB	Knight Commander of the Bath
KG	Knight of the Order of the Garter

MAAF	Mediterranean Allied Air Forces
MAP	Ministry of Aircraft Production
MBE	Member of the Order of the British Empire
MC	Military Cross
Med ME	Mediterranean and Middle East
MM	Military Medal
MO	Medical Officer
MVO	Member of the Royal Victorian Order
Nor	Norway
NWAAF	North-West Africa Air Force
NZPAF	New Zealand Permanent Air Force
OBE	Officer Order of the British Empire
OC	Officer Commanding
OM	Order of Merit
OTU	Operational Training Unit
Pol	Poland
PRC	Personnel Reception Centre
RAAF	Royal Australian Air Force
RCAF	Royal Canadian Air Force
RFC	Royal Flying Corps
RNAS	Royal Naval Air Service
RNR	Royal Naval Reserve
RNZAF	Royal New Zealand Air Force
Rus	Russia
SAAF	South African Air Force
SASO	Senior Air Staff Officer
SEAC	South-East Asia Command
SEAAC	South-East Asia Air Command
SFTS	Service Flying Training School
SHAEF	Supreme Headquarters Allied Expeditionary Force
SMEC	Special Medical Examination Centre
SMO	Senior Medical Officer
TAP	Tactical Air Force
USAAF	United States Army Air Force

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[BACKMATTER]

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