NACHTJAGD

DEFENDERS OF THE REICH 1940–1943

MARTIN W. BOWMAN

Nachtjagd, Defenders of the Reich 1940-1943

Martin W. Bowman

Pen & Sword
AVIATION

First Published in Great Britain in 2016 by
Pen & Sword Aviation
an imprint of
Pen & Sword Books Ltd
47 Church Street, Barnsley, South Yorkshire S70 2AS

ISBN 9781473849839

A CIP catalogue record for this book is available from the British Library.

Typeset in 10/12pt Palatino
by GMS Enterprises PE3 8QQ

Printed and bound in England by
CPI Group (UK) Ltd, Croydon, CR0 4YY

Pen & Sword Books Ltd incorporates the Imprints of Pen & Sword Aviation, Pen & Sword Family History, Pen & Sword Maritime, Pen & Sword Military, Pen & Sword Discovery, Wharncliffe Local History, Wharncliffe True Crime, Wharncliffe Transport, Pen & Sword Select, Pen & Sword Military Classics, Leo Cooper, The Praetorian Press, Remember When, Seaforth Publishing and Frontline Publishing.

For a complete list of Pen & Sword titles please contact
PEN & SWORD BOOKS LIMITED

47 Church Street, Barnsley, South Yorkshire, S70 2AS, England
E-mail: enquiries@pen-and-sword.co.uk
Website: www.pen-and-sword.co.uk

Contents

Acknowledgements

I am indebted to all the contributors for their words and photographs, in particular Nora Norgate; Jim Moore DFC and The 49 Squadron Association. I am equally grateful to Theo Boiten for information, images and invaluable reference work. And to everyone connected with the Kracker Archive, Simon Parry and John Foreman.

Thanks also go to my fellow author, friend and colleague, Graham Simons, for getting the book to press ready standard and for his detailed work on the photographs; to Pen & Sword and in particular, Laura Hirst; and Jon Wilkinson, for his unique jacket design once again.

'Pauke! Pauke!' ('Kettledrums! Kettledrums!'): the Leutnant had obtained visual contact of his target. It was a 'Lanki', crossing gently from port to starboard. His bordfunker immediately transmitted 'Ich beruhe'. Then they closed in rapidly for the kill - 300, 200, 150 metres, finally opening fire from 100 metres.

Strikes peppered the fuselage and danced along the wing root. Another two-second burst and the four-engined bomber burst into flames. Doomed, it fell away to port in a flaming death dive, impacting in a German forest. Gouts of fuel from ruptured tanks ignited and lit up the night sky with a reddish hue. The engines buried themselves deep into the earth. 'Sieg Heil!' said the pilot over R/T to ground control. The British bomber crew had unwitting been 'homed in' on: its H_2S set had been picked up by the night-fighter's 'Naxos Z' FuG 250, while Flensburg FuG 227/1 homed in on the bomber's 'Monica' tail-warning device.

On another night it would be the turn of the Leutnant and his Unteroffizier to be the preyed-upon. It was all part of a deadly and sophisticated electronic game in which the RAF, the Luftwaffe, aided by the scientists, pitted their wits in an ethereal, nocturnal battleground. One side gained the ascendancy until the inevitable counter-measure was found.

Confounding the Reich: The Operational History of 100 Group (Bomber Support) RAF.

Chapter One

‘Night Fighting! It Will Never Come To That!’

Josef Kammhuber was born in Tüssling, Bavaria on 19 August 1896, the son of a farmer. At the beginning of World War I he was 18 and joined a Bavarian engineer battalion. He experienced the Battle of Verdun in 1916 and was promoted to Leutnant in 1917. He was allowed to remain in German’s tiny post-war army and in 1925 was promoted to Oberleutnant. Between October 1926 and September 1928, he received division-level leadership training. From 1 May to 30 September 1930 he was sent to the USSR for secret pilot training. On his return he joined the staff of General Walter Wever, chief of staff of the Luftwaffe. He was promoted to Hauptmann on 1 February 1931. Wever was in the process of attempting to set up a strategic bomber command but in June 1936 Wever was killed in an air crash. Kammhuber had continued to rise in the ranks, promoted to Major on 1 October 1934, Oberstleutnant on 1 October 1936 and then Oberst on 1 January 1939. Kammhuber had put in a request in February 1939 for active duty. Promoted to Generalmajor, he was assigned as chief-of-staff of Luftflotte 2 and was in this position at the start of the war in September. In January 1940 he was transferred to the Western Front where he became Geschwader-Kommodore of KG51, a tactical bomber unit. During the French campaign he was shot down and captured and interned in a French PoW camp at the age of 44. He was released at the end of the Battle of France in July 1940 and returned to Germany where he was placed in command of coordinating flak, searchlight and radar units. At the time these were all under separate command and had no single reporting chain; so much of the experience of the different units was not being shared. The result was XII Fliegerkorps, a new dedicated night-fighting command.

Patrick Foss was born in Ketton, Rutland on 8 November 1913. When he was about nine years old he decided he wanted to go to sea in the Merchant Navy. He searched a reference book of schools and found the Nautical College, Pangebourne. His mother, who ran the Linden Hall Hotel in Bournemouth, agreed that she would send him there when he was thirteen. At the end of his first year, aged fourteen, he spent his summer vacation signing on a tramp steamer on the run from Cardiff to Oporto in Portugal as a shilling a month steward. He slept late and ate in the officers’ quarters, but did any work that needed doing, from scraping paint to taking a turn at the steering wheel. When he was seasick the Captain sent him down to the engine room where he was put to work greasing the steel piston rods as they reciprocated out of the cylinders. It was at that point in the ship where the movements were minimal. A year later Foss signed on for another trip with his brother Denis, this time from Barry Docks in South Wales to Nantes on the River Loire in France, conveying coal dust to a power station.

Returning to Barry Docks he glimpsed dimly the dimension of the vast unemployment gripping Britain. These were the early days of the Great Depression and something like two million were registered unemployed. Then and there he decided that for an ambitious lad like him the sea was not his profession. His thoughts turned to the sky.

While he waited for work at Saunders Roe, which had no work, Foss worked at a garage near the Linden Hall Hotel, pumping petrol into the customers' cars. He ground in valves and helped skilled men work on jobs and learned a great deal. He felt sure that he was headed on his chosen road of aviation. Then came the next step along the aviation path. A young aviation engineer visited the hotel. He told Foss that if he wanted to learn to fly, the most inexpensive way was to go to Germany where he could get cheap flying instruction, especially on gliders, because of the high rate of exchange of the Travellers Mark. Foss at once booked the first course in the spring of 1931 on the Wasserkuppe in Bavaria. Germany led the world in the art of gliding. This was no accident. Under the Versailles Treaty, following World War One, Germany was forbidden to train military pilots and so men who looked ahead to the building an air force used gliding to create a reservoir of men skilled in the basics of flying.

After a long rail journey down the Rhine and into the hinterland Foss reached the mountain, Wasserkuppe, upon which the gliding school stood. He found a number of German youth milling around the station and they clubbed together to hire a taxi. The school consisted of long, low army huts, divided into small rooms sleeping two each. Other huts were a dining room, cook house and workshops, with hangars alongside. The whole place was under several feet of snow and a blanket of fog. There was no possibility of gliding. They were given some ground instruction and sat around and filled the day as best they could. Foss found two Britishers on the course, one a dance band drummer in his mid-thirties and the other a student aged twenty-one.

Foss flew gliders during the day and found someone to give him lessons in German in the evenings. He became very good friends with Günther Groenhoff, who was a test pilot for the remarkable designer, Dr. Alexander Lippisch who had an experimental glider workshop nearby.[1] Groenhoff was the national sail-planing champion who held several long-distance and height records. Foss graduated to the small Klemm low-wing monoplane with a 60 hp engine.

That summer of 1931 in Marburg many of the students were being enrolled in the Sturm Abteilung Hitler legions. His friend Hans Stech was among them and he took Foss along to the parades - 'hundreds of marching youth in their brown shirts and swastika armbands, singing through the streets'. The young Englishman could see that the Nazis (National Socialists) were 'going places and capturing the youth with big aims and demanding discipline and sacrifices'. He was impressed, as most youngsters of seventeen would be. Foss wrote: 'At that time in England there was little get up and go spirit and young people yearned for it. In both Germany and Britain at that time there were growing unemployment and hopelessness, while politicians manoeuvred and denounced and looked out for their own interests.

'There were at least thirty political parties in Germany that year and I went to some of their parades. The most impressive and frequent were the Nazi parades, with hundreds of students in their brown shirts and breeches moving with discipline. The Nazi challenge was along the lines of an appeal to sacrifice and patriotism. Nazi posters proclaimed: 'The German youth does not smoke' and 'The German girl does not make up her face'. I saw little evidence of the evil thing Nazism was to become. One incident which I put down at the time to student high spirits happened at a lecture I attended at which a Jewish professor was shouted down and driven out of the hall with blows.'

In 1932 Foss returned to Germany to take an advanced gliding course near Kassel and he returned to Germany twice more before war closed the frontiers. He found a

number of German soldiers enrolled on the course. He got on well with them and they with him and was invited into their barracks and saw the 'not permitted' tanks and other military equipment that they manned. ‘I still did not realise the significance of their involvement in the gliding as a means of bypassing the ban on military flight training, as Germany began its building of an air force’ he wrote. ‘Nine years later, as I flew over Germany at night on bombing raids, I wondered if the German fighter pilots hunting me might be the same men with whom I learned to fly in Kassel. I comforted myself with the thought that those men had probably by now been promoted to Generals.’

He returned to Germany twice more before war closed the frontiers. As he travelled, his German had improved sufficiently for him to be taken as a German, though they detected something different from his accent. Germans from the south would ask, 'Aren't you from Hamburg?' or, in northern tones, 'Aren't you from the Black Forest?' Yet he could barely write a word and I had no grammar. In 1935 Foss had an added incentive to visit Germany. While ice skating at an ice rink, he met a delightful girl from the Harz Mountains in middle Germany named Renate. She was a blonde beauty and he became very fond of her and she of him. He went to her home and met her family. Nearby an air force flying school had been opened and he heard that they had lost eighteen pupils in flying accidents in the previous weeks. He thought that they must have been working under a great deal of pressure. One day Renate took Foss for a walk in the woods. She suddenly stopped, told him to stand still and went and looked around behind all the trees. Then she sat down and to his surprise, for he was expecting something different, began to whisper about a terrible place near there which she called a 'concentration camp'. ‘Clearly it distressed and frightened her, but its horror did not impinge on my mind’ wrote Foss. ‘I was equally obtuse when I was travelling through the country and stayed the night in Bremen in the home of a young woman I had met. The family was Jewish and well-to-do. In the late evening we heard marching feet in the street below the flat, stamping, singing and shouting. The family were clearly mortally afraid and told me it was the SS (Hitler Bodyguard men). Then came terrifying sounds; glass smashing, the crash of doors being broken down, cries, shrieks and drunken oaths. I wanted to look out of the window, but the family begged me not to or make any sign that the flat was occupied. I had never seen people in such terror, but I didn't draw any conclusions from the incident, certainly not that such scenes would be allowed to grow in Germany and other countries until war became inevitable.’

Back in Britain Foss applied for a short service commission of six years as a pilot in the RAF and from a crowd of applicants he was one of just two who were selected. The selection board was no doubt impressed that both applicants stood out as a result that they had done something unusual. In the 1930s Foss had become a recruit to the Oxford Group (later Moral Re-Armament) which had challenged him to make a daily practice of ‘trust and teamwork, coupled with asking God to show what is right,’ as he put it. From this, he claimed, sprang much of his initiative and willingness to carry responsibility. Foss had trained as a sailor and had completed glider training in Germany and the other applicant had flown light aircraft in northern Canada; summer and winter. The RAF would teach them to fly all over again but first they had to wait nine months before the Service took them for training.

Foss went on to fly elderly biplanes like the Armstrong Whitworth Atlas and Siskin, of metal and fabric before progressing to the Handley Page Hinaidi biplane developed from the WWI Handley Page HP 500, at Upper Heyford. Early in 1934 he was posted to 7 Squadron at Worthy Down near Winchester in Hampshire to fly the Vickers Virginia biplane bomber. In 1935, when the squadron was first beginning to equip with Heyfords, it was thought for a time that they might have to fly them into combat after

Benito Mussolini, the Italian dictator invaded Ethiopia. Although Mussolini's invasion of Ethiopia did not involve Britain, in 1936 7 Squadron moved to one of the airfields under construction at Finningley near Doncaster in South Yorkshire with the promise of re-equipment with Wellesley bombers. In 1937, with about eighteen months of his short service to go before transfer to the Reserve, Foss - now a flight lieutenant - was posted to Andover, Hampshire, to 142 Squadron, equipped with Hawker Hinds and commanded by Squadron Leader Edward Collis de Virac Lart.[2]

Early in 1938 Foss flew to Manchester to collect the squadron's first Fairey Battle bomber and his next task was to convert all the pilots on to the low winged monoplane which had a crew of three. In May that same year they were ordered hurriedly to disperse their Battles into the fields around the airfield at Andover. Eighteen months later the Battle squadrons were sent to stop German tanks invading Belgium and Holland with disastrous results. The Battle squadrons were decimated and the aircraft was never heard of again as a fighting plane. On 3 September 1939 war with Germany was declared and Foss became a flying instructor.

In the late 1930s the RAF considered that bombers like the twin-engined Hampden, Wellington, Whitley and Blenheim with machine-gun turrets and flying in close formation to maximize defensive fire power against attacking fighter aircraft were unbeatable: It was even assumed that these aircraft did not need any form of fighter escort to reach and destroy their assigned targets. Events would soon shatter this illusion but in the 1930s for anyone who wanted to fly, the RAF was considered to be the best 'Flying Club' in which to do just that. In Germany however, the mood was quite different. During the Spanish Civil War of July 1936 to March 1939 volunteers from the Luftwaffe and the Wehrmacht Heer served with General Franco's Nationalists. Hugo Sperrle commanded the unit's aircraft formations. The 'Legion Kondor', upon establishment, consisted of the Kampfgruppe 88, with Ju 52 bombers and the Jagdgruppe 88 with Heinkel He 51 fighters, the reconnaissance Aufklärungsgruppe 88 (supplemented by the Aufklärungsgruppe See 88), an anti-aircraft group, the Flakbteilung 88 and a signals group, the Nachrichtenabteilung 88. Overall command was given to Hugo Sperrle, with Alexander Holle as chief of staff.[3] The Legion Kondor developed methods of terror bombing which were used widely in the Blitzkrieg tactic in World War II. The destruction of Guernica a town in northern Spain in Operation 'Rügen' at about 1630 on Monday, 26 April 1937 by waves of Ju 52 and He 51s commanded by Wolfram Freiherr von Richthofen resulted in perhaps 200-300 people killed but the number reported dead by the Basques was 1,654 dead and 889 wounded. In his journal for 30 April, von Richthofen wrote: 'When the first Junkers squadron arrived, there was smoke already everywhere (from the VB [VB/88] which had attacked with three aircraft); nobody would identify the targets of roads, bridge and suburb and so they just dropped everything right into the center. The 250s toppled a number of houses and destroyed the water mains. The incendiaries now could spread and become effective. The materials of the houses: tile roofs, wooden porches and half-timbering resulted in complete annihilation. Most inhabitants were away because of a holiday; a majority of the rest left town immediately at the beginning [of the bombardment]. A small number perished in shelters that were hit.'

When Britain declared war on Germany in September 1939 young RAF bomber pilots were enthusiastic and confident in their aircraft and equipment. The RAF believed that modern aircraft like the twin-engined Hampden, Wellington, Whitley and Blenheims with machine-gun turrets and flying in close formation to maximise defensive firepower against attacking fighter aircraft were unbeatable. The strategy was that these aircraft did not need fighter escort to reach and destroy targets but as the Luftwaffe would discover in the Battle of Britain (and much later the Americans

from 1942 onward), this was all wishful thinking. The Handley Page Hampden and the Vickers Armstrong Wellington, Armstrong Whitworth Whitley and Bristol Blenheim, all twin engined bombers, were the mainstay of Bomber Command early in the war.

Like many of its genre, the Wellington was weakly armed but quite often it was this bomber's exploits, which featured in the headlines in the British press and sometimes in German papers as well. During the first month of the war the RAF mostly focused its bomber attacks against anti-shipping operations on the German Bight. Operations by 24 Wellingtons against elements of the German fleet at Heligoland on 3 September 1939 met with stiff opposition from fighters and flak. Although 'Freya' radar had warned the German gunners of the impending raid the thick cloud at their bombing altitude fortunately had hidden the Wellingtons from view. Four Messerschmitt Bf 109Ds of 1 Gruppe Zerstörergeschwader 26 at Jever led by Hauptmann Friedrich-Karl Dickore climbed and intercepted the bombers after they had bombed but their aim was spoiled by cloudy conditions. Even so, the two pairs of Bf 109Ds damaged two of the Wellingtons in the attack. One pair attacked from above and the other pair from below. Leutnant Günther Specht, who damaged one of the Wellingtons, was shot down by return fire. Specht ditched in the sea and he was later rescued. The German had been wounded in the face and later had to have his left eye removed. [4] Luckily for the Wellington crews, the three remaining Bf 109Ds were low on fuel and they broke off the engagement, while sixteen Bf 109D/Es and eight of I./ZG26's new Bf 110Cs arrived too late to intercept the bombers.

Continued bombing operations by the inexperienced Wellington crews were brave but foolhardy; especially when one considers that many of their battle-hardened opponents had honed their fighting skills in the Legion Kondor in Spain. On 14 December twelve Wellingtons on shipping searches were attacked Bf 109Es of II./JG77 that had taken off from Wangerooge together with four Bf 110s of 2/ZG26 at Jever and five Wellingtons were shot down. Air Vice-Marshal John Eustace Arthur 'Jackie' Baldwin, AOC 3 Group was compelled to compare it to the Charge of the Light Brigade. Worse was to follow. RAF bombers mounted a heavy attack against shipping off Wilhelmshaven on 18 December in what came to be known as the 'Battle of the Heligoland Bight'. Twenty-four Wellingtons on 9 Squadron, 37 Squadron and 149 Squadron formed up over Norfolk heading for the island of Heligoland. Two aircraft aborted the operation due to mechanical defects, but the remaining 22 pursued the attack and as the Wellingtons approached the German coast near Cuxhaven, Bf 109 and Bf 110 fighters of Jagdgeschwader 1, guided by radar plots of the incoming formation made by the experimental 'Freya' early warning radar installation at Wangerooge and directed by ground control, were waiting. The Wellingtons were easy pickings and the RAF crews were caught cold as the cunning German fighter pilots made beam attacks from above. Previously, attacks had been made from the rear but now the German pilots tore into the bombers safe in the knowledge that the ventral gun was powerless at this angle of attack. They knew too that the front and rear turrets could not traverse sufficiently to draw a bead on them. For almost half an hour 44 Luftwaffe fighters tore into the Wellingtons. In addition to the twelve Wellingtons lost and the two written off in crashes, three others were damaged in crash landings in England. Luftwaffe fighter claims for aircraft destroyed on the raid totalled 38, which later, were pared down to 26 or 27. Among these, Oberleutnant Johannes Steinhoff's claim for two destroyed was reduced to one. [5] Hauptmann Wolfgang Falck of 2./ZG76 who claimed two Wellingtons, force-landed his aircraft on Wangerooge after return fire from the bombers damaged his engines. Only two of I/ZG76's sixteen claims were disallowed, one of which was Falck's second. Falck's wingman, Unteroffizier Fresia, was credited with two confirmed

destroyed. Leutnant Uellenbeck limped back to Jever with no fewer than 33 bullet holes in his 110.

'I was with the second formation on a course of 120 degrees, about fifty kilometres to the north of Ameland. Suddenly we came upon two Wellingtons flying 300 metres beneath us, on the opposite heading. I attacked the leader from the side and it caught fire. Then I opened fire on the second one, from the left and above. When he didn't budge I moved into position 300 metres behind him and opened up with everything. The nose of the bomber fell and it dived towards the sea. It was at this time that I was hit by a bullet, between my neck and left shoulder; the round went clean through me and hit Unteroffizier Dombrowski the radio operator on his left wrist.'

Uellenbeck's claims for two destroyed was upheld. Though RAF crews claimed twelve German single and twin-engined fighters, just three Bf 109 fighters were lost and a handful damaged or hit.

Wolfgang Falck, born on 19 August 1910 in Berlin, had begun his pilot training at the Deutsche Verkehrsfliegerschule (German Air Transport School) at Schleissheim on 7 April 1931. The course he and 29 other trainees attended was called Kameradschaft 31 among whom were men like Hannes Trautloft and Günther Lützow. Falck graduated from the Deutsche Verkehrfliegerschule 19 February 1932. In February 1933 he attended the Infantry School at Dresden for officer training and made Leutnant in October 1934. In March 1935 Falck became an instructor at the Deutsche Verkehrsfliegerschule at Schleissheim and in April 1936 he was promoted to Oberleutnant and transferred to JG132 'Richthofen' at Jüterbog-Damm as Staffelkapitän of 5 Staffel. In July 1938 Falck was appointed Staffelkapitän of 8 Staffel of the new JG132 at Fürstenwalde. The new unit was later redesignated I./ZG76 and equipped with the Bf 110 Zerstörer fighter. Falck led 2./ZG76 during the Polish campaign from Ohlau in Silesia, gaining three victories over Polish Air Force aircraft. The unit was then relocated to Jever to protect the northern seaboard and the Kriegsmarine naval bases.

As well as Falck the 'Battle of the Heligoland Bight' also produced another pilot destined to find fame with the Nachtjagd, although success at night at first seemed to elude him. Leutnant Helmut 'Bubi' ('Nipper') Lent of 1./ZG76 in a lone Bf 110 Zerstörer was one of the pilots ordered to intercept and engage the attacking bomber force and he put in claims for three of the Wellingtons when he landed at Jever. Two of these, which were shot down at 1430 and 1445, were later confirmed. Both aircraft were on 37 Squadron and were captained by Flying Officer P. A. Wimberley and Australian Flying Officer Oliver John Trevor Lewis respectively and they crashed in the shallow sea off Borkum. Wimberley survived but his crew died. Lewis and his crew were killed also. It is likely that his third claim may have been Wellington IA N2396 LF-J on 37 Squadron, piloted by Sergeant H. Ruse, which he crash-landed on the sand dunes of Borkum with two men dead. Lent was refused the victory over Wimberley, as the Wellington was attacked by Lent after it had already been badly damaged and was about to crash. The Wellington was credited to Carl-August Schumacher. Lent later flew combat operations in Norway with 1./ZG76, where he scored seven victories and was awarded the Iron Cross 1st Class.

Blenheim light bombers fared no better than the Wellingtons on daylight shipping searches in the North Sea. In the first and only encounter between Blenheims and Bf 110s, on 10 January 1940 in mid-morning, nine Blenheims on 110 Squadron led by Squadron Leader Ken Doran DFC took off from Wattisham in Suffolk in three 'vics' for a North Sea shipping reconnaissance. At roughly the same time, Hauptmann Wolfgang Falck led four Bf 110s of 2./ZG76 from Jever airfield near Wilhelmshaven on a westerly course over the North Sea for a routine patrol. When flying 200 kilometres north of Terschelling Island, one of the German pilots spotted a handful of specks on the horizon

and warned his leader on R/T. Swiftly, the sleek Zerstörers curved onto the course of the British intruders. Within seconds, Falck identified the dots as Bristol Blenheims and ordered his Flight to attack. At 1152 the fighters dropped onto the tails of the Blenheims, which at that time, having no under armament, were very vulnerable to attack from below so Doran led the formation of three vics of three aircraft down to sea level in plus 9 boost. It was to no avail - Schwarmführer Falck's cannon shells struck home and Blenheim P4859 of 110 Squadron exploded on the surface of the sea. Twenty-six year old Sergeant John Henry Hanne, married, of Maida Vale, London, his 23-year old observer, Sergeant George Llewelyn Williams, of Ynsddu, Monmouthshire and nineteen-year old AC1 Edwin Vick, WOp/AG of Morecombe, Lancashire, were killed. Two other Blenheims on 110 Squadron were badly shot up during the 25 minute engagement. N6203 crashed on return at Manby in Lincolnshire and N6213 was written off at Wattisham. These were claimed destroyed by Leutnants Helmut Fahlbusch and Maximilian Graeff. After expending all their ammunition, the four German fighter pilots broke off the fight and jubilantly flew back to Jever, all with slight damage. Following this encounter Doran continued with the reconnaissance, which earned him a bar to his DFC. [6]

During the period from 14 February to the end of March 1940 Blenheims of 2 Group completed another 250 North Sea shipping sweeps, which resulted in the loss of only four aircraft and their crews. They all fell victim to German fighters. One of these was N6211 on 110 Squadron, shot down by Hauptmann Falck of 2./ZG76 on 17 February north of the Dutch Frisian Islands. Sergeant Frederick John Raymond Bigg, the 27-year old pilot, Sergeant William Barnard Woods, the 21-year old observer and AC1 Jack Orchard the 20-year old WOp/AG were reported missing and are commemorated on the Memorial at Runnymede for those members of the RAF and Commonwealth Air Forces who have no known grave.[7] That same month Hauptmann Falck was appointed Gruppenkommandeur ZG1 at Düsseldorf. The Gruppe was relocated to the Baltic coast in April and on 9 April Falck led the unit during the invasion of Denmark. He recorded his seventh (and final) victory, shooting down a Danish Fokker C.V taking off from Værløse.

Serious losses finally convinced the Air Staff that a profound change of its daylight policy was necessary. Following heavy Wellington and Blenheim losses in daylight the elderly Whitley squadrons were immediately employed in night leaflet dropping operations and made no appearance in daylight at all. When RAF Bomber Command took the decision in May 1940 to start strategic bombing of Germany by night, there was little the Luftwaffe could do to counter these early raids. The subject of night fighting was raised at a conference of German service chiefs just before the war and according to Kommodore Josef Kammhuber who was present at the conference it was dismissed out of hand by Hermann Göring with the words, 'Night fighting! It will never come to that!'

Up until May 1940 the night air defence of the Reich was almost entirely the province of the flak arm of the Luftwaffe. No specialised night fighting arm existed though one fighter Gruppe (IV./(N)JG2) was undertaking experimental 'Helle Nachtjagd' (illuminated night fighting) sorties with the aid of searchlights in northern Germany and in the Rhineland. IV./(N)JG2 flew the Bf 109D with the cockpit hood removed as a precaution against the pilots being blinded by the glare of the searchlights.

On the night of 25/26 April Oberfeldwebel Hermann Förster of the 11th Staffel NJG2 shot down a Hampden on a mine-laying operation near Sylt, the first Bomber Command aircraft to be shot down by a fighter at night. The aircraft was L1319 on 49 Squadron. Pilot Officer Arthur Herbert Benson and crew were killed. Forster went on to claim two Fokker G.Is in Raum ('Box') 'Rotterdam' on 10 May and Hampden P4286

on 44 Squadron at Oosterhout on 14/15 May. Pilot Officer Leslie James Ashfield and his crew were killed. On 24 May Förster destroyed a Blenheim at Borkum. Förster also claimed Hampden I P1178 on 83 Squadron at Often near Aachen on 3/4 June. Flying Officer Francis John Haydon and crew were killed. On 9 July he destroyed a Whitley twenty kilometres north of Heligoland. Forster joined 2./JG27, scoring another six daylight victories. Hermann Förster was killed in action on 14 December 1941 flying with JG27 Afrika in North Africa. His last victory was on 10 December when he shot down a Boston III fifteen kilometres east of Bir Hacheim to take his final total to twelve Abschüsse.

On 22 June 1940 Hauptmann Wolfgang Falck, Kommandeur, I./ZG1 who had some experience with radar-directed night-fighting sorties in the Bf 110 flying from Aalborg in northern Denmark that April, was ordered to form the basis of a Nachtjagd, or night fighting arm, by establishing the first night fighter Gruppe, I./NJG1. While at Aalborg Falck had prepared a comprehensive tactical appraisal report on night interception. Thus after I./ZG1's participation in the Battle of France General Albert Kesselring ordered Falck to take his unit to Düsseldorf and reform for the night fighter role. On 26 June Falck was appointed Kommodore of NJG1 and IV./(N)JG2 was incorporated into the first Nachtjagd Geschwader as III./NJG1. From Düsseldorf airfield Bf 110s and Do 17Zs of NJG1 undertook experimental night-fighting sorties in defence of the Ruhr with the aid of one flak searchlight regiment. In July the creation of a true night air defence for the Third Reich was dramatically accelerated when Göring ordered Josef Kammhuber to set up of a full-scale night fighting arm. Within three months, Kammhuber's organisation was remodelled into Fliegerkorps XII and by the end of 1940 the infant Nachtjagd had matured into three searchlight battalions and five night fighter Gruppen.[8] Major Falck received the Ritterkreuz in October 1940. He was to command NJG1 for three years and in partnership with General Josef Kammhuber develop a highly effective night fighter force.

Kammhuber organized the night fighting units into a chain known to the British as the ‘Kammhuber Line’, in which a series of radar stations with overlapping coverage were layered three deep from Denmark to the middle of France, each covering a zone about 32 kilometres long (north-south) and twenty kilometres wide (east-west). Each control centre or zone was known as a ‘Himmelbett’ (literally translated, 'bed of heavenly bliss' or 'four-poster bed' because of the four night-fighter control zones), consisting of a ‘Freya’ radar with a range of about 100 kilometres, a number of searchlights spread through the cell and one primary and one backup night fighter assigned to the cell. RAF bombers flying into Germany or France would have to cross the line at some point and the radar would direct a searchlight to illuminate the aircraft. Once this had happened other manually controlled searchlights would also pick up the aircraft and the night fighter would be directed to intercept the now-illuminated bomber. However, demands by Bürgermeisters in Germany led to the recall of the searchlights to the major cities. Later versions of the ‘Himmelbett’ added two Würzburg radars, with a range of about thirty kilometres. Unlike the early-warning ‘Freya’ radar, Würzburgs were accurate (and complex) tracking radars. One would be locked onto the night fighter as soon as it entered the cell. After the Freya picked up a target the second Würzburg would lock onto it, thereby allowing controllers in the ‘Himmelbett’ centre to obtain continual readings on the positions of both aircraft, controlling them to a visual interception. To aid in this, a number of the night fighters were fitted with a short-range infrared searchlight mounted in the nose of the aircraft to illuminate the target and a receiver to pick up the reflected energy known as 'Spanner' or ‘Spanneranlage’ (‘Spanner’ installation) literally translated, a 'peeping Tom'. ‘Spanner I’ and ‘Spanner II’, a passive device that in theory used the heat from engine exhausts

to detect its target, were not very successful.

Nachtjagd's first official victory over the Reich was credited to Oberfeldwebel Paul Förster of 8./NJG1 when off Heligoland at 0250 hours on 9 July he destroyed Whitley V N1496 on 10 Squadron at Dishforth. Flight Lieutenant D. A. Ffrench-Mullen and his four crew who were on a bombing operation to Kiel, survived and were taken prisoner. Förster was a former soldier who trained as a pilot in 1936 and as a Zerstörer pilot he scored three day victories in 1940. After he was shot down and wounded he was assigned to the role of flying instructor and later served as a staff officer. In 1943 he retrained as a night fighter pilot and on 1 June 1943 he joined 1./NJG1 where Förster achieved four more night victories.

Often called 'Father of the Nachtjagd' Werner Streib, born on 13 June 1911 in Pforzheim, helped develop the operational tactics used by the Nachtjagd during the early and with the likes of Wolfgang Falck made the Luftwaffe's night-fighter arm an effective fighting force against the RAF bombing offensive. After a spell in banking and finance, Streib had joined the Wehrmacht as an infantryman. A transfer to the Luftwaffe, as an observer in a reconnaissance unit followed and later he trained as a fighter pilot. In 1937 he was assigned to Jagdgeschwader 2 'Richthofen' at Jüterbog-Damm. He then became a Bf 110 Zerstörer pilot in Wolfgang Falck's ZG1 as the war began. The first of Streib's 66 Abschüsse and the only one in daylight was a Bristol Blenheim on 10 May 1940. By the end of July I./NJG1 operating from Gütersloh airfield near Münster had a fortunate spell of operations, destroying six bombers in the 'Helle Nachtjagd' system. Streib, now Staffelkapitän, 2./NJG1, shot down Whitley V P5007 on 51 Squadron in the early hours on 20 July 25 kilometres northwest of Kiel. Flight Lieutenant Stephen Edward Frederick Curry and three others on his crew were killed and one was taken prisoner. This was followed on 21/22 July by Whitley V N1487 on 78 Squadron flown by Sergeant Victor Clarence Monkhouse ten kilometres north of Münster. All the crew were killed. Streib soon added to his score, claiming two Wellingtons on 30/31 August and three bombers on 30 September/1 October. Kammhuber realised that 'Helle Nachtjagd', entirely dependent as it was on weather conditions and radar-guided searchlights was only a short-term solution; it simply could not penetrate thick layers of cloud or industrial haze over the Ruhr and other industrial centres in the Reich. He soon concentrated all his energies in developing an efficient radar-controlled air defence system.

In July 1940 Patrick Foss was promoted Squadron Leader and he joined 115 Squadron at Marham in Norfolk which was equipped with Wellingtons. 'At the time' wrote Foss[9] 'there were three RAF Groups operating night bombers, mainly against Germany. The Wellingtons were in 3 Group, Whitleys in 4 Group and Hampdens in 5 Group. Other Groups controlled the light bombers, fighters, coastal reconnaissance and so on. All three Groups of night bombers had twin-engined aircraft with crews of between four and six. Bomber Command's attack plan called for raids each night, if weather allowed, on such 'military' targets as oil plants, factories, harbours and railway marshalling yards. When the moon was minimal one Group would fly each night. When there was a moon the three Groups doubled up, which meant we did a raid every other night. A raid was a major operation; a station complement of two thousand or more was needed to launch up to twenty Wellingtons on one night.

'Aircrews lived a strange life. On our off days, on these comfortable, long-established stations, we lived like country gentlemen in a fair degree of luxury and almost as if the war did not exist. On flying nights, we stole out like cat burglars to venture out, each aircraft singly, over the seas and into enemy territory, where we felt hunted and watched every minute. We flew in a high degree of tension. The sight of shells bursting in the sky ahead, often seen for an hour or more before we reached a

target, had a mesmeric effect on me as my imagination leaped around. Highly subjective feelings kept me thinking more about my skin than about the people in the dark far below me. I did not want to die, nor have my courage tested by a shell burst or a fighter's attack.

'I realised somehow I had to conquer this deep desire for self-preservation and treat the whole business as a surgeon would an operation. As each trip brought more near-misses by shells or close encounters with fighters, I became more and more conscious of the dangers and I also began to question whether what we were doing was of any real use in the war. This helped me to understand why some men, their fear building up raid after raid, failed to press home attacks on their targets and instead dumped their bombs in the area before turning for home. It meant, of course, that they told lies to the debriefing officers and their aircrew went along with them because they, too, were afraid.

'It was the responsibility of a flight and squadron commander to know his men and understand the build-up of pressures, raid after raid. Each captain was different and the commander had to judge when each crew should come off operations to allow them to rest and re-think, as well as to train new crews in all that they had experienced. At this time Command had set a tour of 31 trips. The average loss rate was around 25 trips, so every raid over 25 gave a crew the sense they were lucky to be still alive.

'During World War I men were treated as cowards when they lost their nerve; and some authorities took the same line early in World War II. It proved to be a useless course; it encouraged no one to do better. The desirable way was to get a man to be honest and admit his fears and seek the support of his brother officers. When I did this with men, particularly when I became squadron commander in Malta, it seemed to have a profound effect on them and on me too. I learned that the more afraid the average man is, the more likely he is to push home attacks and take risks, if only to prove he is not afraid. The bravest men, I found, were those who conquered their fear by facing it, not those who had no idea of the danger of what they did.

'I could see that we lived double lives - our 'gentlemen's lives' and our almost secret nefarious outings to Germany. It was a very personal war. If we did not fight it, no one else would. Almost all of us experienced 'twitch' and other symptoms of stress in the eyes, the lips or the bowels. But the stress did not lead us to dump bombs or pull away from attack. It boosted morale in a remarkable way, so long as it was contained by a relationship with each other which was honest and caring. Looking back at the raids we flew in the early days to attack 'military' targets, the marshalling yards and factories, I shudder at how amateur we were. The targets for new crews were the big railway yards at Hamm and Soest, on the edge of the Ruhr industrial area - Ham and Eggs was the obvious crew slang for them.[10] They were large area targets and not so heavily defended as was the Ruhr area itself. There were planners who believed that bombing a railway yard would cause delays and disruption of communications. My own experience in 1938, before the war, of trial bombings of railway lines at the Army Corps of Transport railway experimental centre had convinced me - and the Army - that damage could be repaired in a few hours and did not cause much delay in a marshalling yard. These attacks were rather artificial, by low-flying Battles, but war experience confirmed that without continuous bombardment the yards were an unproductive target. However, our new crews did gain the experience of flying over Germany, of being shelled and hunted by fighters and of just how difficult it was to identify a military target from a great height in European weather.

'My first bombing raid was on Gelsenkirchen in the Ruhr - the target was a factory. When we arrived in the target area thick smoke and layers of cloud made it impossible to identify anything as small as a factory. I was very suspicious of our visual navigation,

although I had an excellent navigator and had myself been an experienced navigator in peacetime. Since we left England we had seen nothing to pinpoint our position. We could only release our bombs in the general area and turn for home. The German reaction with anti-aircraft flak and searchlights was strong and accurate. As we flew towards Marham, 300 miles distant, our crew talked about the experience. Our conclusion was that if that was the worst we would meet, we had some chance of surviving our tour of operations. But in my mind was the question whether we had bombed the right town, let alone the specific factory. On this and other raids our great problem was finding and identifying a military target by our available means of navigation - map-reading, calculation and hoping to find some identification near our target. Our weather forecasters had only a general and limited idea of the local conditions 300 miles from the UK. They seemed unable to forecast smog or the height of cloud layers.

'On this first raid my navigator and I had hoped that we might see the river Rhine and get a fix from that, but we never saw the river. There was one aid on which we came to rely heavily, the German range-type wireless stations, which they switched on to aid their own aircraft. We took bearings with our loop aerial. But these only helped us to get into a four or five mile area around the target. There came a night when we filed into the briefing room before a raid and were horrified to be told that no German radio station was on the air. It would not have surprised me to learn that each of our aircraft hit a different target that night.

'On my next raid, to an oil processing plant at Wesseling, near Cologne we carried a photo flash bomb with our other bombs so that we could photograph our target. My navigator and I worked out a track to strike the Rhine at its junction with the Moselle. From there we would count the loops in the Rhine until we reached the one on which Wesseling lay. As we approached the Wesseling curve, my bomb aimer lay below me, looking down through the aiming window, directing me by intercom, while the other four crew manned the fore and rear gun turrets and the look-out in the upper astrodome. The second pilot sat beside me, acting as counsellor, lookout and ready to take over the controls, should I be wounded. In order to get a good photograph, the flash bomb had to be dropped at a precise height and the camera, fixed in the aircraft, had to be aimed so that the lens did not pick up the direct light of the flash, when the bomb burst after falling to about one thousand feet above the ground. The flash activated a photo cell which closed the camera shutter. This photography required that the Wellington be flown straight and level on a long run in. Straight and level at a precise height was a delight for German flak gunners!

'This was another murky night, with a layer of cloud at the height we had planned to drop the flash bomb. We could see a Whitley bomber caught in the beams of searchlights, directly above our target, lit up by the reflection from the clouds as though in bright moonlight. Shells were bursting all round him. We decided to glide in below him, hoping the defences would not pick us up while they concentrated on the Whitley. We arrived over the target without being picked up and let go our bombs and the flash bomb. When the flash went off it seemed as though the defences were blinded for a few seconds. Then all hell was let loose at us. Shells began to burst around us; we could hear the explosions and see the black puffs of smoke. Our rear-gunner called that he thought he saw the lights of a fighter nearby. The searchlights bracketed us and I threw the Wellington into twists and turns to try to throw them off. They did not let go. Any moment could be our last. I sweated with fear as I pulled and twisted the controls. Then I offered up a prayer to be shown what to do.

'At that moment an extraordinary impression came over me. I seemed to be outside the Wellington, away in the sky. I could see the aircraft in the lights and shell bursts, as

though I were a spectator. Then I saw how I might break out of the defences if I made a highly dangerous manoeuvre. As I saw this, I had a feeling of confidence that what I should do was right. Then I was back in the Wellington, frightened and heaving at the controls. I pulled the aircraft up into a big stall turn, fell over and spiralled down towards the earth. Almost at once the lights shut off and we were falling in utter darkness. I eased the aircraft out of the dive to be parallel with the unseen ground. At that moment a single searchlight came on and lay along our track, showing us that we were a few hundred feet above the countryside and lighting up hills ahead of us. The light went out and we climbed to avoid the hills and return to operating height for the flight home.

'Back in the interrogation room at Marham we commented, rather smugly, the Commander-in-Chief calls our bombing 'gardening' [not to be confused with minelaying operations which were called 'Gardening']. Air Marshal Sir Charles Portal, Chief of Bomber Command, had been invited by our Station Commander to witness a demonstration of dive bombing by a Wellington. Afterwards the C-in-C talked to us about the pin-pointing of targets by night. He said we were digging up the German countryside with our bombs. It was not until 1942 with the introduction of the pathfinder force, which used radar to fix their positions and marked them with fires that the main force bombers could be sure where the area of the target of the night lay. A few minutes after our 'gardening' the print of our flash photo revealed a factory in a curve of the Rhine with four bombs bursting on the roof! Unfortunately, when we compared the photo with our detailed map of the target, it in no way fitted. Someone suggested that perhaps the map was wrong. Wearily, we trailed off to bed. Three weeks later a report arrived from the Photo Interpretation Unit. They had identified the place where our bombs had fallen - a tank factory in Cologne, ten miles from our intended target!

'When the Luftwaffe made their bombing attacks on London in July 1940, the Prime Minister ordered us to attack Berlin. This was the longest trip we had ever attempted in the Wellington, close to our maximum range with full tanks and minimum bomb load. We set off for Berlin with half a gale blowing from the west, low and middle cloud and murk on the ground. We were given strict instructions to turn back after three and three-quarter hours flying, wherever we were, to be sure of returning to Britain against the gale. As I reached three and three-quarter hours we thought we might be in the Berlin area. We had failed to get any fixes on the route and the weather was heavy cloud and total blackness. We glimpsed below us lakes and forests, but never a light or other indication of a city. There was nothing worth bombing and no time for a search. We turned for home and began to plug back against the gale. After an hour or so we saw lights on the ground, which we identified as an airfield working night fighters. We made to bomb them but our bomb releases failed to work. We plugged on and finally, over the North Sea, succeeded in losing our bomb load, saving us some petrol. We landed at Marham with less than thirty minutes of fuel remaining after eight and a half hours in the air. Our other crews returned with similar stories. No one was sure he had hit Berlin. We hoped other stations had had more luck.

'A few days later, we were ordered to bomb the Channel ports, Calais and Le Havre, our shortest trips ever. They were on brilliant moonlit nights and we could clearly see the lines of barges waiting to carry the German army to invade Britain. From 6,000 feet they looked like match sticks. We had filled every hook with high explosives and fire bombs. The Germans had only deployed light flak guns and these were less accurate at our height. I saw fires break out along the docksides and in the barges, followed by many explosions. On one raid I saw quite clearly water jets being played by fire-fighters - the first time we had seen a result of our attacks. Thanks to the efforts of our fighters,

the Germans never achieved the air supremacy over southern England which they needed for a successful invasion. However, the destruction wrought by our bombers on the ports and barges must also have played a part in their decision to call off the invasion. That decision ultimately meant losing the war.

'In August 1940 we made a long trip towards Magdeburg to attack an aircraft factory at Bernberg. The night was clear and moonlit and I could see the Hartz Mountains where I had visited friends in 1932. We passed near Goslar, the home of Renate, my pre-war girl friend. When we reached our estimated time of arrival we were delighted to see below us a cross of big runways and sheds, but I was not sure that this was our target so put the second pilot in my seat and went down to lie beside the bomb aimer to have a better look. I had been troubled by seeing, five miles to the south, bombs bursting and flak coming up and wondered if that was the right target. As we lay there, trying to decide, suddenly our Wellington went into a steep dive and then we saw our bombs leave and crash through the roofs of the sheds. As we pulled out of the dive, chunks of the roofs flew past us, very close. At once guns opened fire and I could feel strikes on our aircraft. At the same time a force, like a giant hand, seized our Wellington and threw it upwards. Once we were away from the target area the second pilot started making excuses for the attack, saying we were running out of time and he was sure that we had found the right target.

'I went all around the aircraft to see what damage we had sustained and found nothing that was serious. However, I was very troubled that each of our three compasses seemed to be giving a different reading. We attempted to verify them by the moon, but without moon tables or a sextant we failed. So we averaged the three readings and steered a general westerly direction. Clouds now prevented us from fixing a position. When we expected to reach the coast we saw a coastline and a flashing beacon. In a discussion with the crew, one of them thought the beacon might be on the English coast, so we flew close and fired our recognition signal, a very light giving the colours of the day. It was answered by light flak and we dashed out to sea. In a couple of minutes we passed over a bund and then wave crests. This convinced me we must have crossed a part of the Dutch Zuider Zee and if so we were embarking on a flight of about 150 miles across the North Sea.

'I checked our fuel gauges and found several were showing nil and others only small amounts of fuel, maybe half an hour's running, certainly not enough to get us beyond the middle of the North Sea. We seemed bound for an emergency landing at sea, something none of us had rehearsed; indeed, I had no idea even how to activate the dinghies. I doubted whether air/sea rescue boats operated so far out. I asked the crew for their suggestions. One option was to turn back and land on the beach and surrender ourselves. No one would hear of that. So we continued westwards. As we strained our eyes looking for land, we kept seeing it, only to find it was cloud on the water.

'When I asked the wireless operator to try and get a bearing from the Direction Finding service in England, he told me his wireless was playing up, but he would try. Then he told me he could hear several SOS calls and that meant that the D/F stations would concentrate on them. I insisted he keep trying and he finally received a bearing. I plotted it on the chart; it was almost due north and put us out in the English Channel.

'I couldn't believe it. I asked our operator if the bearing could be a false one put out by a German station. They were known to give false bearings to our aircraft in distress. If we were half way across the North Sea and turned north we would go down in the cold sea en route to Iceland. The operator assured me it was a good bearing from an English station. I swallowed my doubts and turned north. The sun was up, but cloud was solid below us. Suddenly there was a gap and I saw a green field. I pulled back

the engines and dived for this break. I saw fields dotted with high posts and other anti-invasion obstructions; it must be the south of England. I gingerly opened up our engines again, noting that every fuel gauge registered empty.

'Suddenly, right ahead, appeared a grass airfield, apparently empty. I dared not circle to look more closely because if we banked our wings the petrol might run away from the outlets and stop the engines. I shut down and went straight in. As we ran across the field I noted large piles of earth dotted about. We came to a halt beside a flying control building with no sign of life. We got out and began to look for someone. We came upon a sandbagged shelter and out of it peered a steel-helmeted RAF figure, a Pilot Officer.

'What's this place?' we asked. 'This is West Malling' (in mid-Kent).

'Funny sort of airfield,' I commented, 'full of molehills.'

'Not moles' he replied, 'unexploded bombs; they've been going off all through the night.'

'We jumped down into his hole, telephoned Marham and requested to be re-fuelled.

'I went and looked over the Wellington and decided it was safe to fly on. A refueller arrived, manned by some very nervous airmen. We had never been refuelled so fast; then they were gone. We learned that on the previous day a big raid by German bombers flying towards London had been met by RAF fighters over West Malling and had dumped their bombs before turning back to France. The airfield had been evacuated, its fighters sent elsewhere. Only this one flying control officer had been left. We rumbled across the airfield to take off, my heart in my mouth, fearing our vibration might set off an explosion.

'Back in the interrogation room at Marham our plots and timings were carefully analysed. Another crew had claimed to have hit the target factory and set it on fire. It was probably the fire we had seen to the south of us. The other Captain was a very experienced pilot from civil aviation and he was convinced he had hit the right place. We put a bold face on our story, although I had doubts. To complicate matters, the Group Air Vice-Marshal had telephoned to congratulate the station and added, 'There is an immediate award of a Distinguished Flying Cross in this, please give me the name.' Both crews were bone weary and it seemed impossible to decide who had hit the right target. The Station Commander invited us to toss a coin and the other Captain won. I was glad of it, especially when, a few days later, he was shot down. His wife had something to show off his gallantry.[11]

'Operations over Europe became steadily more hazardous week by week as the Germans developed their air defence from the coast to Germany, with permanent sites for radar, searchlights, flak and night fighters with their elaborate control. One night, as we returned from a raid on the Ruhr, our rear-gunner reported that he could see a fighter following us. He had first reported its white downward recognition light (which helped his gunners on the ground.) Then he reported blue and gold lights in the cockpit and he could count two heads. I asked him to keep giving me their distance behind us, estimated with his gunsight, but on no account to fire. I reckoned our firing would give our enemy a pinpoint to aim at and his cannons were much more deadly than our two Vickers guns firing at a head-on fighter. He crept up on us slowly. I turned left, he followed us. I turned right and dived and again he followed us. It was clear he could not see us, but had some device by which he could follow us. Before the war I had exercised with ground operators who listened to aircraft approaching England for air defence purposes and I had helped them to calibrate. In the course of doing this I heard a hint that there were other ways of picking up and fixing aircraft flying in. So I had a suspicion that this German fighter might be carrying similar equipment.

'As we made our way to the Belgian coast we played a cat and mouse game. I could

not throw him off and he did not have enough confidence to open fire. Finally I instructed the rear-gunner to aim and, when the fighter came within 150 yards, to shout. At once I pulled the Wellington up into a high stall. We hung there on the engines and then fell out of the stall, to find that the fighter was about one hundred yards ahead of us. He immediately began hunting around to find us on his screen, but he couldn't see backwards. At the coast he dived away and we continued on our way to Marham.

'Our Intelligence people appeared to be very interested in our report of this encounter. One hinted that this was a very early report of German airborne radar in use. The RAF had its own disinformation campaign about radar. Before each sortie bomber aircrews were handed red lozenges - we called them cat's eyes - and were informed that they were carrots, to help us see better in the dark. After the war, I heard that the Germans, after many interrogations of shot-down crews, had put scientists to work to investigate the powers of the carrot, perhaps to explain their own bomber losses by night over Britain.'

On the other side of the North Sea Nachtjagd pilots began to rack up high scores. Oberfeldwebel Paul Gildner of 3./NJG1 claimed three aircraft over the Netherlands during September 1940. Gildner, born on 1 February 1914 in Nimptsch (Silesia), had volunteered for the Wehrmacht in 1934 as an infantry officer but had transferred to the Luftwaffe. Gildner was already serving as a Oberfeldwebel Zerstörer pilot when war began in September 1939, flying the Messerschmitt Bf 110 with 1/ZG1. Gildner flew intensively during the European campaign in May-June 1940 and also flew sorties during early stages of the Battle of Britain. In August 1940 after training in night flying he was transferred to 4./NJG1). He scored his first Abschuss on 3 September 1940 when he shot down Hampden I P4370 on 144 Squadron (which he identified as a Whitley) and which was detailed to bomb Ludwigshafen. The bomber crashed near Sittard just on the German side of the border with Holland at 0045 hours on the night of the 2nd/3rd when 84 aircraft of RAF Bomber Command attacked a wide variety of targets in Germany, France, Holland and Italy. Pilot Officer R. S. A. Churchill and one crewmember were taken prisoner; the two others were killed. On the night of 18/19th at 2230 hours near Groenlo, Gildner shot down Whitley V P5008 on 58 Squadron, which had been detailed to bomb Hamm. Sergeant Albert Alfred Ellis Crossland and crew were killed. Two hours later, at Zieuwent, Gildner shot down another Whitley, N1425 on 77 Squadron, which was detailed to bomb Soest. Pilot Officer Peter Ernest Eldridge and his crew were killed. After Falck and Streib, Gildner was the third Nachtjagd pilot to be awarded the Ritterkreuz, on 9 July 1941 after his 14th Abschuss.

On the evening of 16 October 1940 Leutnant Ludwig Becker of 4./NJG1 and his bordfunker Unteroffizier Josef Staub claimed Nachtjagd's first ground radar-directed kill at Oosterwolde. Ludwig Becker was born on 22 August 1911 in Dortmund-Aplerbeck in the Province of Westphalia, a province of the Kingdom of Prussia. Joining the Luftwaffe volunteers in 1934, by 1939 he was a test pilot and a Leutnant in the Luftwaffe reserve. Serving with NJG1, he crashed a Messerschmitt Bf 110 near Winterswijk on 30 August 1940. On what was a perfect moonlight night on the 16th of October flying a Dornier Do 17Z-10 equipped with the experimental 'Spanner' night-vision device they were guided onto the tail of a Wellington by Jägerleitoffizier (JLO or fighter-control officer) Leutnant Hermann Diehl of the experimental 'Freya' station at Nunspeet in Holland. The Wellington, L7844 KX-I on 311 Czechoslovak Squadron at East Wretham, was being flown by Pilot Officer Bohumil Landa. Becker reported:

'At about 21.20 I was controlled by Leutnant Diehl at Nunspeet using Freya mit Zusatz and Würzburg, using Morse on the tactical frequency. I was guided very well at the correct height of 3300 metres with constant corrections towards the enemy at his starboard rear and suddenly saw, about 100 metres to my left and above, an aircraft in

the moonlight, which on approaching closer I recognized as a Vickers Wellington. I closed in slowly behind him and gave a burst of about five of six seconds, aiming at the fuselage and wing roots. The starboard engine caught fire at once and I drew my machine up above him. For a while the Englishman [sic] continued, rapidly losing height; then the fire went out and I watched him spinning downward and finally crash. I observed no one bailing out. I returned to my standby area.'

The Wellington crashed at 2145 hours near Oosterwolde/Doornspijk. Landa and three crew were killed. Sergeants Emanuel Novotny and Augustin Sestak bailed out safely before their aircraft was completely destroyed in the crash near Oosterwolde at 2145. Landa and three of his crew were found dead in the wreckage the next day. It was Becker's first Abschuss. Becker, born on 22 August 1911 in Dortmund-Aplerbeck in the Province of Westphalia, a province of the Kingdom of Prussia, had volunteered for the Luftwaffe in 1934 and became a Stuka pilot before joining the Bf 110 Zerstörer and becoming a night fighter pilot in July 1940. Serving with NJG1, he crashed a Messerschmitt Bf 110 near Winterswijk on 30 August 1940. In 1941-42 Becker became one of the leading 'Experten' in the Luftwaffe night fighter arm. He shot down forty bombers in 1942 and taught the new and young crews from his experiences. To them Becker 'The Night Fighting Professor' was an inspiring fatherly figure. Instrumental in introducing the Lichtenstein AI radar into the night fighter arm in 1941 though most night fighter aircrew were sceptical about it (they liked to rely on the 'Mk I Eyeball'). Becker had one of the still experimental sets installed in his Do 217Z night fighter at Leeuwarden, 161 kilometres (100 miles) north of Arnheim on the Friesland coast. Guided by the revolutionary radar, his and Nachtjagd's first AI victory was in the early hours on 9 August 1941 in a Do 215B-5 night fighter version of the Do 215 reconnaissance-bomber when 44 Wellingtons of Bomber Command attacked Hamburg. Becker shot down six RAF night bombers 8/9 August-29/30 September 1941. He was awarded the Knight's Cross in July 1942 and he then served as a Staffelkapitän in 12./NJG1. By the end of the year, Becker had forty victories to his credit. Becker and his bordfunker Oberfeldwebel Josef Straub (who had taken part in forty victories) were posted missing in action on 26 February 1943 in a Bf 110G-4 while on a daylight sortie intercepting a Boeing B-17 formation over the North Sea and crashing north of Schiermonnikoog in the Netherlands. All his 46 victories were at night.

At midnight on 1/2 October 1940 Leutnant Hans-Georg Mangelsdorf of the 2nd Staffel NJG1 shot down a Whitley V near Hummelo, 21 kilometres east of Arnhem. His victim was P4964 on 78 Squadron at Dishforth which crashed at Sterkrade with the loss of New Zealand Pilot Officer Neville Halsey Andrew and crew. Two weeks later, on the 14/15th, Mangelsdorf was killed during aerial combat with a Hampden on 44 Squadron, crashing eight kilometres west of Gardelegen airfield. I./NJG1 at Venlo, Netherlands in order to more easily intercept the known RAF bomber routes into targets in the Ruhr, claimed five 'Helle Nachtjagd' kills. These included Hampden Is X2910 on 44 Squadron piloted by Sergeant Leonard John Burt and X2993 on 50 Squadron flown by South African Pilot Officer Arthur Howell Davies on a bombing operation on Berlin. Burt and two of his crew were killed, one being taken into captivity. Davies and one of his crew were killed, two others being taken prisoner. Three of I./NJG1 's victories were credited to Oberleutnant Streib, a feat which earned him the award of the Ritterkreuz on 6 October with eight victories claimed. He was the first night fighter pilot to be honoured with the Knight's Cross.

Nachtjagd's final kills over the Continent during 1940 went to 4./NJG1. Oberleutnant Egmont Prinz zur Lippe Weissenfeld destroyed Wellington IC P9286 on 115 Squadron ten kilometres west of Medemblik on 16/17 November, the aircraft going down in flames at 0205 hours to crash near Winkel, Holland and with the loss of

Sergeant Donald Ewart Larkman and crew. Twenty-nine year old Feldwebel Hans Rasper of the same Staffel destroyed Whitley V P5012 on 102 Squadron on 15/16 December ten kilometres northwest of Petten off the Dutch coast at Egmond. Flight Lieutenant Kenneth Thomas Hannah and his crew were killed. Rasper's bordfunker, Erich Schreiber was killed in 1942. Rasper was taken prisoner on 26/27 April 1945 after he was shot down in Mittelfels, near Cham, by American ack-ack during a strafing run. He had seven Abschüsse.[12] At least nineteen Bomber Command aircraft were destroyed July-December 1940 in the 'Kammhuber Line', as the continuous belt of searchlights and radar positions between Schleswig-Holstein and northern France was christened by the British bomber crews. About thirty bombers were brought down by flak during the same period. Apart from organising an effective short-range defensive Nachtjagd, Kammhuber also appreciated the value and effectiveness of 'Fernnachtjagd' (long-range night intruding) over Britain but the 'Intruder' force was never raised beyond one single Gruppe (I./NJG2) which operated the Ju 88C-6 and Do 17 from Gilze-Rijen in the Netherlands. It never exceeded 21 aircraft but despite this and severe operational losses (21 aircraft alone during 1940) 'Fernnachtjagd' made a promising start. The Gruppe's first intruder victories were two Wellingtons destroyed by Feldwebel Otto Wiese 100 kilometres west of Texel and Georg 'Gustav' Schramm over the North Sea on the night of 22/23 July 1940. Weise was killed on 21/22 June 1941, shot down over Peterborough by Beaufighter R2277 on 25 Squadron piloted by Flying Officer J. M. Herrick and he crashed at Deeping St James.[13] By December 1940 claims for another sixteen bombers followed. (By October 1941 the handful of crews in I./NJG2 had claimed more aircraft destroyed than all other Nachtjagd units combined). On 20/21 October 1940 when 139 bombers went to many targets in the occupied countries, Italy and Germany, a Whitley, 'O-Orange' on 58 Squadron at Linton-on-Ouse, which crashed on fire, on the slopes of the Cleveland Hills near Ingleby Greenow in Yorkshire, was claimed shot down by Hauptmann Karl Hülshoff commanding I./NJG2, the specialist German intruder unit. Pilot Officer Ernest Henry Brown and two of his crew were killed. Two were injured, one of whom died two days later. Hülshoff claimed the Whitley as a 'Hereford'. He destroyed four more aircraft over England during 1940-41, adding another seven victories before the end of the war. Hülshoff was awarded the Deutscheskreuz in Gold. He was taken prisoner on 10 March 1941.

Hamburg, the second largest city of the Reich, with a population of just over a million and a half, was one of many targets bombed on 24/25 October when 113 aircraft tried to reach many targets in the Reich. One Wellington was lost on the raid on Hamburg. At Linton-on-Ouse nine Whitley Vs on 102 Squadron were detailed to bomb the Air Ministry Building in the Leipzigstrasse in Berlin. Pilot Officer A. G. Davies took off at 2202 hours and just six minutes later he was shot down in flames near Tholthorpe by 21-year old Feldwebel Hans Hahn of III./NJG2 who claimed it as a 'Wellington' for his first victory. Davies was injured and the second pilot and the observer died in the aircraft. Sergeant Angus Stewart Wilson and Pilot Officer Terence Edward Lee died of their injuries on 2 November.

On 28 October Leutnant Heinz Völker flying a Ju 88C-4 attacked two Hampdens on 49 Squadron as they were returning from Hamburg to Lindholme. The first Hampden was damaged but was able to land safely. Völker then attacked a second, which went down in the North Sea half a mile off Skegness with the loss of all Pilot Officer John Raymond Bufton's crew.[14] Völker scored a total of twelve victories and was awarded the Ritterkreuz. He and his two crew were killed on 22 July 1941 when over Ashwell, Hertfordshire, their Ju 88C-4 collided with a Wellington of 11 OTU. All eight men on the Wimpy were killed.

Victory claims submitted by night-fighter crews in the Reichsverteidigung (Air

Defence of Germany) coupled by the long-range intruder operations over the UK and the North Sea grew steadily. During January 1941 eight bombers were destroyed by Nachtjagd. Six were by the intruders of I./NJG2. The two others - Whitley V T4203 on 78 Squadron by 23-year old Oberleutnant Reinhold Eckardt of II./NJG1 on the night of 9/10th, which went down between Millingen and Kekerdom, Holland with the loss of Sergeant Charles Arthur Smith and crew - and Whitley V N1521 on 58 Squadron by Oberleutnant Egmont Prinz zur Lippe-Weissenfeld of 4./NJG1, which crashed near Callantsoog, Holland on the 15/16th. Pilot Officer William Edgar Peers and his crew also died.[15]

Sir Richard Peirse committed a total of 222 aircraft to oil targets in Hannover on 10/11 February, which fell during the February new moon. The previous highest Bomber Command sortie rate was 135, to Gelsenkirchen in the January 1941 moon period. The bulk of the Hannover force was made up once again of Wellingtons, of which 112 took part.[16] Sergeant pilot Bill Garrioch and his crew on 15 Squadron took off from RAF Wyton near Huntingdon in Wellington IC T2702 'H-Harry' for their 16th operation of the war as he recalls:

'The briefing officer announced the target, the route in and out and the bomb load - 4,000lb made up of seven 500lb bombs and the balance in incendiaries. The Met Office forecast clear skies, strong westerly winds, a full moon and very cold. The CO, Group Captain Forster said that this was to be the biggest show of the war to date, wished us all the usual good luck and told us to beware of moving stars (night fighters)! This great man, a First World War pilot, still wore a steel brace on his back caused by spinal injuries received in a crash. Even so, he flew with us occasionally. Take-off was timed for 1730 hours and the flight duration expected to be about seven hours. Then followed the usual pre-flight planning between pilot, navigator and crews. We then went to the mess for our tea of bacon and eggs, back to our quarters to change into warmer clothing and of course to empty our pockets. The ritual of this act always gave me a momentary feeling of apprehension until I put some small change back into my pocket in case we had to land away from base on return. The funny thing is I had only half a crown in small change, which I put into my pocket; that being the only article carried on my person.

'We boarded the Bedford crew bus for the six-mile journey to Alconbury our satellite airfield. Generally during these bus journeys there was the usual chatter, pocket chess or cards but on this occasion everyone seemed quiet and preoccupied with their thoughts, so much so that our navigator Sergeant Bob Beioley remarked on it. Bob and Sergeant Glyndwr 'Taffy' Rearden, WOp/AG had completed twelve operations with me on Blenheims prior to converting to the 'Wimpy'). Prior to air test in the morning Taffy expressed the wish to be front gunner that night as a change from being cooped up inside the cabin. I agreed, as WOp/AG Sergeant George Hedge RNZAF was also a fully qualified WOp/AG. Soon we arrived at our dispersal. I signed the Form 700 and as I climbed the ladder into the aircraft Chiefy Wright said to me, 'If you break this one; don't bring it back!' ('H-Harry' was Flight Lieutenant Morris's aircraft but my 'D-Dog' was being repaired after I had accidentally hit my wingtip on the control caravan during a previous take-off). I laughed and said that I would be a good boy and nurse his precious 'Wimpy'. I glanced at my watch and at the other aircraft around the dispersal area.

'Time to start up. Fuel on, first port and the starboard engines coughed, burst into life and warmed up at 1,000 rpm. Soon we ran each engine up to take-off rpm (2,650), tested the magnetos, oil pressure and temperature and cylinder head temperature and checked and set the gyro, cooling gills, flaps, etc. All the crew reported ready. The time was now 1725 hours. I gave the signal and with a final wave to our much-appreciated

ground crew, we moved out towards our take-off position near the end of the runway. We were No.2 to go. At precisely 1730 hours No.1 started his take-off run and as he reached the end of the runway I lined up and got my green light from the caravan. Brakes off, I opened the throttle slowly to maximum power as we started rolling. As we gathered speed the noise was deafening and seemed to reach a crescendo that vibrated throughout the loaded aircraft. I kept the nose down until the last bit of the all-too-short runway loomed up, then, pulling up; she lifted clear, a light kiss on the concrete and off. Wheels up and nose kept down to increase flying speed. I throttled back to climbing rpm to reach operating height and the engine noise now changed to a welcome hum. All was well.

'Bob gave me the course, which I confirmed from my kneepad. As the snow-covered countryside receded far below in the darkness, Sergeant Bill Jordan, the 2nd pilot who was on his second trip with me for familiarization, flew the aircraft and the gunners entered their turrets while I visited each member of the crew to ensure that all was in order. Soon we reached the coast at Orfordness and levelled off at 11,000 feet. The navigator and the wireless operator were at their stations and the lighting was very subdued, creating an eerie yet efficient atmosphere tinged with the smell of dope and fuel, amid the roar of the smooth-sounding Pegasus engines. When we were over the sea Taffy and Sergeant Jock Hall, rear gunner, a Scotsman with many trips in Coastal Command, test-fired their guns. From now on we were on the alert for night fighters. It was cold and clear. The patches of white cumulus would make us an easily identified target seen from above. I took over before we reached the Dutch coast, which we crossed at 1850 hours - another 213 miles and 65 minutes to the target. We had a very strong tail wind and ground speed was nearly 200 mph. Bob got a pinpoint. We were almost dead on track - a slight course alteration and all was well. We were lucky so far.

'It was unbelievably quiet. We flew towards the target and still there was no flak. We were very much alert but it was the easiest run-in so far and the ground was easily identifiable. Only five minutes to the target. Then we saw it. Bob was a good navigator - we were almost spot on. On the eastern horizon the rising moon assisted target identification. With bomb doors opened and bombs fused Bob went down to the bombsights. He saw the target nestled in the crook of the 'Y'-section of a big road junction. We had a following wind so I throttled back a little and kept the aircraft steady. Right a little ... I did not see any activity at all, not even a little flak. The first Wimpy's bombs burst. Then suddenly there was a series of flashes close to Gilmore's aircraft. Bob called, 'Left... left ... left ... a bit more ... steady now ... steady.' Flak now curled lazily up towards us and then there was heavy ack-ack to our left. It was accurate for height but was not near us. Must be the other aircraft in trouble. Bob called 'Bombs gone!' and I immediately turned steeply to port. Jock in the rear turret watched our bombs burst. There were only six flashes. Where was the seventh? Gilmore's aircraft started a fire and our incendiaries were well alight. Ack-Ack was almost non-existent with us but as we flew away we saw other aircraft getting a hot reception and the sky was full of flak. All this time the fires seemed to grow in intensity - Hannover was visible forty miles away. The moon was up and it was like daylight. We watched for enemy fighters but all was quiet and we could not even see other aircraft.

'Against a strong head wind our ground speed was now only 85 knots; it was going to be a long haul home. Large white cumulus clouds were building up below. As we crossed the eastern coast of the Zuider Zee at Kempen, Jock suddenly called out, 'Fighter below and behind!' I put the engines to cruising revs and steep turned to starboard to face him. As I turned I saw a Me 110, which was turning to meet me. I turned violently to port to avoid him. Jock gave him a long burst but he still attacked, hitting the aircraft in the fuselage and port engine. I put the flaps down and soon the

shooting stopped. He had overshot. I heard the cannon fire hit the aircraft somewhere behind me. Jock said that he had been hit. Could we get him out of the turret? The port engine was on fire. I turned off the fuel and full throttle. Bob called, 'Are we on fire?' Bob's sudden announcement on the intercom must have paralyzed my senses if only for a fleeting instant because as I was looking through the cockpit window, superimposed in space, just outside the windscreen was a very clear picture of my grandfather and a great uncle looking directly at me. It was so clear that I even recognized my uncle's old tweed jacket! Then it was gone and I was back to reality. It frightened me because these two much-loved relatives had been dead for about seven years. Much later George told me that cannon shells came through the fuselage and exploded in his radio equipment. How he and Bob were not hit I'll never know. I was saved by the armour plate behind my head. At that moment I knew we had to survive and I seemed to find added strength and courage to risk anything that would bring us out of this alive. I looked back and the fuselage was full of smoke. I could not see anyone. Perhaps a flare was burning. Taffy moaned faintly saying, 'Get me out' and I saw the fighter turn to port over our port wingtip. Bill Jordan went forward to open the escape hatch and to get Taffy out of the turret. I told the crew to prepare to bail out and raised the flaps.

'We were diving now. The fighter came in again and once more I put the flaps down and the aircraft yawed violently to port while I throttled back and side slipped to almost stalling speed. Cannon and machine-gun tracer went just over the top of us but miraculously we were not hit. This time, as the fighter went over the top of us I raised the flaps and control was easier. I think only the starboard flap worked. I told Taffy to shoot the fighter down, position 10 o'clock. He did not answer. Bill Jordan tried desperately to operate the turret door release and get him out. George Hedge was standing beside me ready to help when Bill opened the floor escape hatch. Bob and Jock were still back in the smoke-filled fuselage. Were they alive? I did not know. I decided that unless we bailed out or landed quickly we would all die. We were blazing very badly now. I signalled to George not to jump as I had not given the order and I dived for the ground in the hope that a crash landing might save some of us. The aircraft persisted in turning to port. We were diving very steeply and fast, over 300 knots. Through the cockpit window I saw the port engine and that the inner wing was now on fire. Off all fuel and full throttle starboard engine. The frozen expanse of the Zuider Zee was hurtling towards us. I tried to level off but the elevators were sluggish and we hit the ice slightly nose down and skidded for what seemed to be miles. Then, suddenly, she broke through the ice and the nose filled up with water and ice through the open escape hatch. Then the aircraft stopped. We must have crashed at about 2230.'

'Taffy' Rearden died trapped in his front turret, which sank beneath the ice. Jock Hall was badly injured with his foot almost severed and he had bullet holes in his burned clothing but surgery at the Queen Wilhelmina hospital in Amsterdam was successful and he survived. 'H-Harry' was one of four losses on the Hannover raid and was credited to Hauptmann Walter Ehle of Stab (staff flight) II/NJG1 from Middenmeer north of Schiphol for his fifth victory. Ehle poured 560 rounds of 7mm machine gun and 100 rounds of 20mm cannon into Wellington T2702, which crashed on the frozen Ijsselmeer about seventeen kilometres west of Kempen. Walter Ehle was born on 28 April 1913 at Windhoek in German West Africa (now Namibia). At the start of World War Two Ehle flew with 3./ZG1 and was credited with three daylight victories before the unit was re-designated 3./NJG1 and he became a night fighter. Ehle would become one of the longest serving Gruppenkommandeur in the Luftwaffe, leading II./NJG1 from October 1940 until his death in November 1943. His sixth night victory was a Bristol Blenheim shot down on 2 June 1942 and he had sixteen victories in total by the

end of 1942.

Three other bombers were lost on 10/11 February and included Hampden X3001 on 49 Squadron at Scampton, which was shot down by Austrian-born Leutnant Leopold 'Poldi' Fellerer of 5./NJG1 north of Bergen-Alkmaar for his victory.[17] Pilot Officer J. H. Green and two of his crew were taken prisoner; one crewmember being killed. Dornier Do 17Z and Ju 88C-2 Intruders of NJG2 claimed six aircraft over England: Oberleutnant Albert Schulz and Hauptmann Rudolf 'Rolf' Jung of 2./NJG2 claimed a 21 Squadron Blenheim and a Wellington near West Raynham in Norfolk respectively. The Blenheim, which Schulz shot down on its return to Watton, was the Oberleutnant's third victory having shot down two Blenheims at Church Fenton airfield on 16 January. Pilot Officer Albert Chatteway and Pilot Officer George Eltham Sharvell were killed. Schulz was shot down and killed by B-17 return fire on 30 January 1944. (Feldwebel Heinz Krüger his bordfunker was killed and Unteroffizier Georg Frieben, bordshütze, bailed out safely). Wellington IC R1084 piloted by Sergeant Harold Humphrey Rogers, crash landed at Narborough without injury to the crew.[18] Twenty-five year old Oberleutnant Paul Semrau of 3./NJG2 claimed two Blenheims near Feltwell for his first and second Night-Abschüsse. As a destroyer pilot, he had destroyed six aircraft on the ground). Oberleutnant Kurt Hermann and his bordfunker Unteroffizier Englebert Böttner of I./NJG2 claimed two Hampdens near Waddington for their 5th and 6th victories. Their first victim was AD719 on 49 Squadron piloted by Sergeant G. M. Bates who was returning to Scampton. A burst of fire set the aircraft on fire. Bates and one of his crew bailed out safely but the other two perished in the aircraft which crashed at Langworth, Lincolnshire. A few minutes later Herrmann attacked a 144 Squadron Hampden piloted by Sergeant William Alexander McVie who was flying with his navigation lights on. Herrmann's fire hit the aircraft's hydraulics, undercarriage and flaps. The lights went out and the Hampden dived away to land safely at Hemswell.[19]

Another 144 Squadron Hampden flown by Sergeant E. Dainty orbited Hemswell but was refused permission to land because of the intruder activity and eventually, low on fuel, the crew abandoned the aircraft, which crashed at Snettisham, Norfolk. After attacking three airfields with incendiary bombs and chasing an unidentified aircraft without result, Hauptmann Rolf Jung, Staffelkapitän 2/NJG2 saw a Wellington with its navigation lights on. It was a 115 Squadron Wellington returning to Marham and flown by Sergeant Harold Humphrey Rogers. He had narrowly missed colliding with two other aircraft and was intent on avoiding a similar situation. Rogers had attacked Rotterdam as strong winds had prevented him reaching his target at Hannover. He had also machine-gunned two airfields in Holland on the return. Near a flashing landmark beacon at Swaffham, Rogers switched on the Wellington's navigation lights. Almost immediately the port engine was hit and Sergeant Hill the rear gunner was wounded in his left arm. The aircraft began to lose height rapidly but Rogers was able to make a successful forced landing on a railway cutting at Narborough.[20] The intruders of I./NJG2 claimed twelve bombers destroyed on intruding operations over England during February.

Despite these highly efficient intruder operations Hitler soon put a stop to 'Fernnachtjagd'. He told Kammhuber: 'If the long-range night-fighting really had results, the British would have copied it a long time ago, as they imitate anything good that I do.' 'And' he added, 'The German citizen, whose house has been destroyed by a British bomber, would prefer it if the British aircraft were shot down by a German night-fighter to crash next to his burning house.' This decision allowed Bomber Command (and later the 8th Air Force) to build up and launch a crushing strategic bombing offensive against Germany virtually undisturbed over the British Isles and it

undoubtedly was a decisive factor in the outcome of the war.

On the night of the 14/15 February Whitley V T4164 on 77 Squadron at Topcliffe was shot down by Major Hans Jüsgen of Stab I./NJG3 eight kilometres south of Nijmegen. Pilot Officer C. R. Hubbard and his crew were taken into captivity. On the night of the 15/16 February Wellington IC T2847 on 15 Squadron went down near Barchem in Holland to Feldwebel Ernst Kalinowski of 6./NJG1 for his second victory. (His first had been a Wellington on 18 December 1939, during the Battle of the Heligoland Bight). Pilot Officer Cyril Bertie Dove and three members of his crew were killed; two others were taken prisoner. On the night of 28 February/1 March Oberfeldwebel Paul Gildner of 4./NJG1 destroyed Blenheim IV T1895 on 105 Squadron at Swanton Morley at Oosterhoogebrug. The Blenheim exploded in mid air and crashed at Oosterhogebrug. Twenty-seven-year old Sergeant John S. H. Heape was taken prisoner; Sergeant Sylvester Jones of Manchester the 26 year old observer and 32-year old Sergeant John Bimson the WOp/AG were killed. It was Gildner's sixth confirmed Abschuss. On 2/3 March Gildner claimed another Blenheim IV when he shot down Z5901 on 21 Squadron at Watton at 2248 hours. The aircraft crashed at Tolbert killing the pilot, Flight Lieutenant John Dickinson DFC and his two crew, the 29-year old observer, Sergeant Charles W. Fry of Whipton, Exeter and Sergeant Robert Mower the WOp/AG. All three airmen were buried at Groningen.[21]

In March Nachtjagd claimed twenty victories, including fourteen over the continent. On 27/28 March 38 Wellingtons and a Short Stirling I set out to attack Cologne and 39 aircraft - 22 Hampdens, thirteen Whitleys and four Manchesters - set out for Düsseldorf. One of the Manchesters, L7307 EM-P on 207 Squadron at Waddington was piloted by Australian Flight Lieutenant Johnnie Aloysius Siebert. On his crew were Sergeants P. C. Robson, second pilot, George Fominson, navigator/bomb aimer/front gunner, Warrant Officer1 J. A. 'Jim' Taylor, Sergeant W. J. J. McDougal, 2nd WOp/AG in the mid-upper-turret and Sergeant Peter Gurnell, rear gunner. The crew had recently recommenced operations following a tour on 44 Squadron on Hampdens and had already visited Cologne, Brest, Lorient and La Rochelle. Group Captain John Nelson Boothman the station CO saw the crews off at around 1930 hours.[22] His parting words, as the crews climbed into the lorry, which took them to their dispersed aircraft, were to the navigator, who was wryly advised to be sure to 'pick out a nice, fat maternity hospital' in Düsseldorf as his aiming-point. This was a sarcastic jibe at 'Lord Haw Haw' who was claiming in propaganda broadcasts at that time that the RAF only bombed hospitals and non-military targets. Their route took them over Holland again. In Eindhoven, on the bombers' route to and from the Ruhr, Kees Rijken, who was twelve when the Germans attacked his country and thus about 14 when the air war really started, was an avid watcher:

'Almost every day and night the allied bombers came over Eindhoven. Most nights my father and I stood in the garden, watching, listening and sometimes sheltering from the shell splinters of the German ack-ack with a pan on our heads. When the ack-ack stopped we knew that the German fighters were airborne. From our house we could see the sky in the direction of Germany start to light up and eventually turn red. When we were standing in the garden my father had the habit of signalling the 'V for Victory' sign to the overflying aircraft with his pocket lantern. The impact of the great numbers of bombs that were dropped upon targets in the Ruhr was so great that sometimes the doors in our house started clattering.'

Düsseldorf was bombed at around 2230 hours in two approaches, dropping eight bombs of 500lbs on each run over the target area. Very intense flak was encountered and one shell burst beneath L7307 and buffeted the starboard wing up in the air. Level flight was resumed and as they set course for England the crew speculated as to