

nals between RAF Middle East, RCAF District HQ in Cairo, and RCAF Overseas Headquarters. Consistent with the policy of Canadianization, Overseas Headquarters wanted the appointment filled with one of its own, but there was no RCAF officer in the theatre whom the RAF considered qualified. Air Vice-Marshal Broadhurst, the DAF's commander, felt that 'owing to the lack of operational experience of the Squadron as a whole, that strong leadership and an officer of outstanding operational experience should be posted' to No 417. He and Wing Commander Patterson finally reached a compromise which Edwards, in London, accepted somewhat reluctantly, in the appointment of Squadron Leader P.S. Turner, DFC and Bar, who had 'turned around' No 411 Squadron in 1942. Turner had since served in Malta and, more recently, as a senior controller in the Sector Operations Room in Heliopolis, Egypt. Other than his failure to be in the RCAF, the twenty-nine-year-old Turner's qualifications were near perfect. With at least ten enemy aircraft destroyed and four or more 'probables,' two DFCs, and more than seven hundred hours of combat flying to his credit, he had a reputation as a disciplinarian where business was concerned, 'deadly serious' in the air but 'one of the boys' in the mess;⁷¹ and he was a Canadian, who understood and appreciated the foibles of his fellow countrymen, whatever badges he might wear.

Army Co-operation Command had played an important role in developing and propagating the concept of air support of ground forces, but, as a training and experimental formation, it still lacked the communications and command structure to operate in the field; and since it was 'now necessary to pass from the phase of development to the phase of action,' it could be dispensed with. On 1 June 1943 the command was disbanded and its component parts merged into a tactical air force within Fighter Command – though 'in order to ensure that full use is made of the large store of knowledge and experience possessed by Headquarters Army Co-operation Command, the staff of the Headquarters will be largely used to form Headquarters Tactical Air Force.' On 28 June the change in designation from Army Co-operation (AC) squadrons to Fighter Reconnaissance (FR) squadrons became official for Nos 400, 414, and 430, as well as the appropriate RAF units.⁷²

At the time of the changeover from Army Co-operation Command to Fighter Command, the air force and its ground-bound brethren were still working out the details of air-support operations. One important area in which army and air staffs had to coordinate their activities was in landing facilities. If they were to provide adequate support for armies in the field, squadrons would need refuelling and ammunition facilities close to the front, and there was much animated discussion over how these were to be provided since the Germans would doubtless do everything possible to destroy existing facilities before they fell into Allied hands. In the first few days or weeks of a continental campaign, immediately after the amphibious assault, construction equipment and materials for airstrips would have to compete for shipping space with other priority items like ammunition and rations. Assuming that an army of two or three corps (which is what each composite air group would be supporting) advanced eight miles each day, the group would probably need six to eight

landing strips the first week and perhaps a further five or six in each subsequent week in order to keep up with the soldiers.⁷³

That required the services of Airfield Construction Groups relying on such prefabricated materials as perforated steel planking (PSP) or rolls of tarred hessian to set up runways in days rather than weeks. Technically an army group resource, these units would fall under the command of corps commanders for the first five days after an assault, during which time they would operate according to a prearranged plan on sites selected off the map (though the army group engineer and his colleagues were allowed to choose alternates should circumstances warrant).⁷⁴

In the early months of 1943 Army Co-operation Command had continued to develop tactics and doctrine, though it was becoming increasingly evident that its success in doing so would lead to its own demise. By this time there was general agreement on the basic tenets of aiding ground formations.

That full air support is an essential requirement in all land operations undertaken against an enemy possessing air power ...

That the paramount factor in providing such support must be the attainment and retention of mastery in the air ...

That such mastery is attained primarily by the Fighter which by day is superior to all other types of lesser performance and armament ...

That, accordingly, all air action must be related to fighter action, and that, therefore, centralised control must be exercised by the Royal Air Force over Fighter Bombers and specialised types for ground attack and reconnaissance.⁷⁵

Air superiority – a term not yet in general or common use in 1943* – could well have been defined, then as now, as ‘that degree of dominance ... which permits the conduct of [air] operations ... without prohibitive interference’ by the enemy.⁷⁶ Traditionally, attaining that objective (or, at least, preventing the enemy from doing so) had been the business of rival fighter arms, as in the Battle of Britain. Fighter Command had won that battle, if only by the narrowest of margins, and since then had easily maintained its dominance in British skies; but its inability to reach out into German air space had compelled Bomber Command to seek another kind of air superiority, by evasion and deception, rather than by fighting.⁷ Closer to home, having secured British airspace, Fighter Command had found itself in a kind of operational limbo, reduced to exercising an uncertain and essentially fruitless version of air superiority over northern France and the Low Countries. The general progress of the war was now bringing the prospect of an invasion of Northwest Europe

* Although Sir Hugh Trenchard had used it as early as 1919.

⁷ The USAAF, with its much more heavily armed ‘Flying Fortresses,’ was still unsuccessfully endeavouring to achieve the conventional kind of air superiority in its daylight bombing operations. It would eventually succeed, in the winter of 1943–4, not through the firepower of its bombers but through the serendipitous development of North American’s Rolls Royce-engined long-range fighter, the Mustang.

into focus, however; and when that prospect matured it would obviously be necessary for Bentley Priory to establish an unyielding superiority in the air space over the beachhead and its environs. Air participation in the ground battle would also be important, and fighter-bombers might have significant parts to play, providing ground support under the umbrella coverage of the air superiority fighters.

The RCAF had its own perspective on all this, shared in principle – but not necessarily in practice – by the Cabinet in Ottawa. The endeavour to implement Canadianization at a moderately high organizational level in the interests of developing a balanced air force (just as First Canadian Army was a balanced land formation, incorporating all the appropriate arms and services) had already led to the formation of No 6 (RCAF) Bomber Group (see chapter 17) and a smaller army cooperation wing. What was required now, in the light of this new emphasis on tactical air power, was the expansion of the latter into a tactical group – a composite formation of fighters and fighter-bombers, and perhaps light bombers, as well as reconnaissance units. The attempt to establish it set in motion a byzantine struggle involving Bentley Priory, the Air Ministry, Air Force Headquarters in Ottawa, RCAF Overseas Headquarters, and First Canadian Army, as every Canadian concerned began to explore the possibility of forming a tactical group to operate with the latter.

In mid-February, a month before Spartan, Air Marshal Harold Edwards had already asked Air Minister Power to consider forming a composite group so that 'RCAF Units could retain their identity.' In a visit to First Canadian Army Headquarters just after Spartan, Group Captain D.M. Smith, commanding No 39 (Reconnaissance) Wing, informed General McNaughton that Edwards was studying the problem and had asked Ottawa for the necessary authority to form a group. Such a formation, requiring some eleven thousand groundcrew and hundreds of aircraft and aircrew for its several dozen squadrons, was not a commitment to be undertaken lightly. Nevertheless, Smith was anxious that Ottawa act quickly, as it was 'now or never' if the RCAF wanted to consolidate its strength in the United Kingdom.⁷⁷

Staff officers and politicians in Canada in no way shared his sense of urgency, however, and signs that the RCAF was becoming troublesome again on the Canadianization issue caused some consternation within the Air Ministry. The director of policy there told his superior, Air Vice-Marshal C.E.H. Medhurst:

As regards the Canadian Composite Group, I think we should discourage this proposal since the segregation of Dominion Air forces into such a Group would inevitably destroy some of its flexibility for employment. We have in the past experienced so much trouble in this respect that I feel it would be a mistake to ask for more ... There would also be the natural tendency to demand that a Canadian Composite Group, if formed, should be employed in the same operational area in which Canadian land troops are located. This might prove a further embarrassment.⁷⁸

Medhurst repeated that opinion to Sir Christopher Courtney, the Air Council's member for supply and organization, suggesting, ominously, 'that we rid them [the RCAF] of any idea of forming a Canadian Composite Group in the near future.'⁷⁹

Sir Douglas Evill, vice chief of the air staff, was willing to be flexible, but only to a point. Policy governing the re-organization of the RAF for continental operations called for the formation of a second composite group (to be identified as No 84) which might train for operations in support of First Canadian Army. The VCAS thought it appropriate to include in it as many Canadian squadrons as might be available, and Courtney agreed, noting that the use of more RCAF squadrons would take some pressure off the British. Evill also suggested the new group's headquarters be established at Gatton Park, where First Canadian Army Headquarters was located. No 83 Group, already resident in the area, might move to Oxford, preparatory to affiliating with Second British Army.⁸⁰

On the surface, the first British moves in this Canadianization chess game were reasonable. It made sense to allocate the experienced formation – No 83 Group – to the army which would, most likely, make the initial landings in Northwest Europe; and, with the 1st Canadian Division on its way to the Mediterranean, the prospect of a weakened and unbalanced Canadian army leading the assault was quickly dimming. However, as Air Vice-Marshal W.A. Curtis, Edwards's deputy at Overseas Headquarters, pointed out, Second British Army was still forming and No 83 Group had no one but First Canadian Army to train with. There was also some doubt as to whether Second British Army, once it was formed, would be more capable or better prepared for the assault than the Canadians.* Air Marshal Sir Trafford Leigh-Mallory agreed with his RCAF colleague, though his reasons for doing so are unknown and it is doubtful whether they had anything to do with Canadianization. McNaughton apparently cared little which group trained with his army, as long as it incorporated those Canadian squadrons trained in tactical support.⁸¹

For the time being No 83 Group continued to work with First Canadian Army, McNaughton accepting the affiliation in principle but hesitating to commit himself fully until Ottawa decided whether or not to form an RCAF composite group. He was well advised not to hold his breath, for Mackenzie King's cabinet was dealing with more important issues such as the defence of the St Lawrence and an acute labour shortage that had already affected production of coal, nickel, and lumber. Thus when, at the end of April, Air Commodore W.M. Yool, the Air Ministry's director of organization, asked if the RCAF was willing to form 'airfields' (the confusing nomenclature bestowed upon the logistical and administrative organizations that supported wings) in the new No 84 Group, Edwards was forced to answer, in the most diplomatic terms, that 'the whole question of Composite Groups is being discussed in Canada at the

* At this time First Canadian Army still comprised an army headquarters, two corps headquarters, two armoured divisions, two infantry divisions, and an armoured brigade. The decision to send 1st Canadian Corps Headquarters and the 5th Armoured Division to Italy did not come until October.

present time and while I am hopeful that we will receive a favourable reply I would like to defer giving a definite decision until a little later on.⁸²

On 19 May the Overseas Headquarters diary recorded that 'the DAOC-in-C [Curtis] advised that the policy to have the balance of RCAF Squadrons all Bombers might have to be altered in view of the possible changes now under consideration and it may be necessary to make some of them Fighter Squadrons.' A few days later, Air Vice-Marshal W.F. Dickson, No 83 Group's RAF commander, proposed that his reconnaissance wing be formed from the three RCAF fighter-reconnaissance squadrons. One of its three fighter wings could also come from RCAF resources, namely the four Spitfire squadrons based on Kenley-Redhill. The other two fighter wings would be provided by the RAF.⁸³

In early June the affiliation issue began to sort itself out. Leigh-Mallory and General Sir Bernard Paget, the commander of British Home Forces, agreed that No 83 Group would be affiliated with First Canadian Army, and No 84 Group, when formed, with Second British Army. On the 16th, however, Breadner reported to his minister that, 'in this connection, Air Ministry have approached the AOC-in-C Overseas in an unofficial way, for the views of the RCAF in regard to assuming responsibility for one of the groups as a Canadian Composite Group to operate with the Canadian Army' – but to do so would require an additional 12,500 personnel. At a subsequent meeting of the War Cabinet Committee, however, Mackenzie King pointed out that 'there had been general agreement that the Canadian war effort had reached its maximum.' The best that could be done was to authorize exploratory discussions with authorities in the United Kingdom so long as they would not involve further expenditures or demands for personnel.⁸⁴

Leigh-Mallory had not waited for Canadian authorities to make up their minds on the matter, but had moved quickly to organize No 83 Group, filling the seventeen positions in each of the advanced and rear headquarters with RAF officers. Edwards found such haste disturbing and complained angrily to McNaughton in a telephone conversation of 19 June. A memorandum by the latter records that

he had been very disappointed ... to find that 83 Gp had been completed by Air Marshal Leigh-Mallory – there were two suitable Cdn Air Vice Marshals available to Com[man]d, one here and one in Canada – these and other Cdn officers had been shut out by the action taken – he had a talk with Leigh-Mallory this morning and had expressed his dissatisfaction, and that he could do nothing under the circumstances about setting up the Cdn part in the G[rou]p until the matter had been approved by the Cdn War Cabinet – he had said, however, if Leigh-Mallory felt it necessary as a matter of urgency for the prosecution of the war, he [Edwards] could, on his own responsibility, proceed.⁸⁵

McNaughton had complaints of his own, similar to those of Edwards, for 'without any written instruction we had found ourselves associated with 83 Gp and it had been necessary to proceed with arrangements for training and

organization provisionally.' When, on 24 June, Ottawa finally authorized Canadian participation in No 83 Group (but not an exclusively Canadian group), some of the pieces fell into place; Leigh-Mallory confirmed that about half the squadrons and personnel in the new group would be Canadian and that he would welcome more, as well as additional staff officers.⁸⁶

In July the RCAF squadrons were organized around 'airfields,' with Nos 401, 411, and 412 forming 126 Airfield while 403 and 421 went to 127 Airfield, the two being grouped together in 17 (RCAF) Fighter Wing. The three fighter-reconnaissance units made up 39 (RCAF) Reconnaissance Wing. The eight airfields in No 83 Group were its logistical and support organizations, each responsible for three squadrons, the latter being thus stripped of much of their groundcrew. By the end of July, within the Second Tactical Air Force (Second TAF), 376 officers, 133 NCO aircrew, and 1,678 groundcrew were RCAF, but only six of thirty-four staff positions at group headquarters were Canadian. Though the RCAF was certainly underrepresented on the staff side, it should be remembered that Ottawa had only given permission for a Canadian contribution to the new formation a month before.⁸⁷

The airfield organization was designed to allow squadrons to move from station to station without the long logistical 'tail' that had been associated with such moves in the past, permitting commanders to concentrate air units wherever they were needed with less delay. Of course, frequent moves were nothing new. No 401, though the least transient RCAF squadron to date, had moved sixteen times in thirty months, while No 421 had moved most often – fifteen times in thirteen months. When the latter celebrated its first anniversary in April 1943, it had already been based at Digby, Fairwood Common, Warmwell, Exeter, Ibsley, Angle, Zeals, Charmy Down, and Kenley.⁸⁸

Throughout the summer, while the three fighter-reconnaissance squadrons concentrated on training, the pace of operations for the seven day-fighter squadrons picked up dramatically. In the latter part of July and all through August Ramrods made up the great bulk of missions, with each squadron flying more escort sorties than all other operations combined. Most were uneventful – in aircrew slang, 'a piece of cake' – though mechanical breakdown could add excitement to an otherwise routine flight.

At about 1226 [hours, 28 July 1943] S/Ldr McNair developed engine trouble when just off the coast ... left wing with P/O Parks escorting him. S/Ldr McNair lost height from about 20,000 ft to 10,000 ft and when about 12 miles off French coast at Dunkirk his engine caught fire and he lost control of his aircraft and dived for the sea. He was able to get out of his kite at about 5000 ft and parachute opened at about 2000 ft. P/O Parks gave a Mayday for him and Orbited him for approx 1:30 hours until relieved by 411 Squadron. Real good show by Parks. When the Squadron heard of S/Ldr McNair's difficulty they immediately pancaked [landed] at Manston and refueled and took part in the A[ir] S[ea] R[escue] and saw a Walrus pick up the Chief and they escorted him to Hawkinge. The Chief was burned about the face and

had a real close call, but is resting satisfactorily in hospital and should be back in a few days.⁸⁹

McNair would demonstrate his full recovery by shooting down an Me 109 south of Ghent at the end of August, his eleventh of sixteen victories.⁹⁰

Standard procedures had not changed, and those squadrons equipped with Spitfire IXs (at this time Nos 403 and 421) flew top cover while the other RCAF squadrons in their VBs or VCs stayed close to the bombers. The Spitfire IX pilots had more opportunity to engage the enemy, and in July and August they claimed twenty-two aircraft destroyed compared with six for the five other squadrons. Flying VBs could thus be rather dull work, and No 411's narrative history relates that 'the pilots' only victories were on the ground – at volley-ball.'⁹¹

By the end of the summer of 1943 the Luftwaffe was in desperate straits, and the German training programme was in ever-growing disarray. Total losses in the first six months of 1943 had been high (almost nineteen hundred aircraft in each of the Eastern and Mediterranean theatres, and almost fifteen hundred in the west), and although industry was gearing up to replace these losses, aircrew were a different matter entirely. The equivalent of two-thirds of the fighter pilots available at the beginning of the year had been shot down by late June, and July and August proved even worse as the Americans sent their aerial armadas ever deeper into German territory. On each of the three fronts – Northwest Europe, Mediterranean, and Eastern – the Luftwaffe lost more than a thousand aircraft in those two summer months. In July it lost 335 fighters in the west, in August another 248; and over the next three months, losses averaged 280 a month. Even though losses in the east and south were dropping dramatically – less flying was being done – these were, in the long run, intolerable rates. To Hans Jeschonnek, the Luftwaffe's chief of staff, the situation was hopeless, and on 18 August he committed suicide.⁹²

While in Northwest Europe the Allies built up their forces and otherwise prepared for an invasion to be carried out sometime in the indeterminate future, in the Mediterranean theatre operations against one of the Axis homelands were an imminent fact. On 20 June 1943 No 417's war diary recorded two noteworthy events: the first was a visit to Luqa by the king; the second was an operational entry: 'A sweep carried out over Sicily.'

No 244 Wing, of which 417 Squadron was a part, was one of the Spitfire formations that had been transferred to Malta in order to support the invasion of the Italian island. Though its first mission was a fighter sweep, No 417's operations in preparation for the assault consisted primarily of escorting Mitchell, Marauder, and Liberator bombers as they bombed Sicilian defences. The Luftwaffe was a prime target, so German airfields were harassed day and night, aeroplanes being destroyed on the ground, while many air- and ground-crew were killed or wounded, and those who survived were soon exhausted through lack of sleep.⁹³ Johannes Steinhoff, a fighter pilot writing years later, recalled the effects of one such attack.

Then it was quiet. Dust came drifting in through the two entrances of our dungeon and only an occasional explosion could now be heard. Circumspectly we climbed up the steps into the open where the scene of destruction brought us up short. Near the entrance, the patch of withered grass which extended up to the ramparts of the aircraft pens had been churned into a hideous landscape of craters, while above the spot where we had parked the 109s two columns of oily black smoke rose high into the air. Fragmentation bombs had perforated their fuel tanks and ignited the petrol. Above the burning aircraft the air shimmered with heat. An enormous dust cloud hung over the rest of the airfield like a white blanket, veiling it from sight. But we could see all too clearly what was left of our two burning aeroplanes, now beyond anyone's power to save.⁹⁴

On 9 July 1943 the Canadians received their final briefing before the invasion, code-named Operation Husky. 'Pilots ... learned to their surprise that in the vast armada they have been protecting is the 1st Canadian Division. We had all been so sure that we would be the first Canadian unit ashore in the invasion of Europe, but we are glad to hear that the Canadian Army was getting a chance at action.'⁹⁵ The next day, as American, British, and Canadian troops waded through the surf to establish themselves on Sicilian soil, the squadron launched thirty-four sorties, either patrolling the area around Cape Passero, in the vicinity of the Canadian landings, or escorting Marauders in a bombing raid on Caltagerone. The Luftwaffe failed to make an appearance,⁹⁶ so those on patrol could afford to take in the scale and strength of the Allied forces moving onto the island. Pilot Officer Hedley Everard was one who was deeply impressed:

It was a perfect summer day and as dawn illuminated the scene below, I was astounded to see more than a thousand ships of all sizes floating on the azure sea. Brilliant flashes from the muzzles of battleships and cruisers identified the positions of the capital ships and their targets ashore were marked by smoke and dust. Radar scanners operating from Malta and on special sentinel ships told us that the hordes of aircraft below were all friendly. The waves of Dakotas carrying supplies inland for forward airdrops were clearly visible and unmolested, except by desultory ack-ack fire from scattered gun emplacements. Lines of barges carrying men, equipment and tanks etched the waters between anchored supply ships and the smoke-screened beaches. The military might displayed below was evident from horizon to horizon.⁹⁷

The British landed on the southeastern shore of the island, the Canadians on the southern tip, and the Americans along the southern coast, altogether a front of some seventy miles. On 16 July, while Eighth Army engineers put the finishing touches to the airfield at Cassibile, some ten miles south of Syracuse, No 417 began flying from that installation. Missions were routine; top cover for Kittyhawk fighter-bombers, air-sea rescue, and fighter sweeps. Although there was no air-to-air combat the Canadians did come uncomfortably close to action on the ground, for the new airfield was still within range of German

artillery, while the Luftwaffe attacked it sporadically by night, though without inflicting casualties.⁹⁸

A week later the Canadians shifted to Agnone, but they soon left when shellfire and mines made the site too dangerous for efficient operations. Their next home was Lentini West, 'a newly made aerodrome in the heart of a great field of wheat,' where the squadron, no longer considered 244 Wing's junior unit, obtained the lone farmhouse as a pilot's dispersal and the only shaded area for its tent lines.⁹⁹ Only two short weeks were spent in these pleasant surroundings, however, the unit then moving to Gerbini, another target for Luftwaffe night bombing. On 11 August:

At about 2015 hours enemy aircraft began to bomb Augusta to the east of us, an almost nightly performance. Bombers however began to work westward, bombing Agnone, Lentini East and then our airdrome Lentini West. Our runway was located with flares and a considerable number of bombs were dropped. Although casualties of killed and wounded in the Wing were quite severe, no casualties were sustained by our Squadron because our well-dispersed living site is some distance from the runway and because the CO insisted every man have an adequate slit trench by his tent. Three bombs fell near the Squadron living site. Immediately the raid ended Squadron personnel proceeded to the airdrome to put out fires in our petrol dump and ammunition dump and to taxi our aircraft away from fires. Seven of our aircraft were hit, two being write-offs, and our Macchi 202 had a wing blown off. Operations reported raid as 50 plus. A number of delayed action bombs were dropped, one near our operations room, which was vacated until the bomb exploded on August 13.¹⁰⁰

The next day the squadron sent out a detachment to attend the funeral of fifteen members of the wing killed in the raid.

Towards the end of the Sicilian campaign (which concluded on 17 August) No 417 concentrated on escorting fighter-bombers and light bombers on interdiction missions, mainly against the ports Axis forces were using to evacuate the island. Usually Flak was of much greater concern than enemy aircraft, but on Friday the 13th Italian fighters mounted the only deliberate air-to-air attack on the Canadians of the campaign. Four Spitfires were searching the seas north of Messina for a downed pilot from another squadron when they were surprised by several Macchi 202s. The engagement ended without loss to either side. Flak, however, took a toll, with one Canadian pilot (who had only joined the squadron the previous day) becoming a prisoner of war and another collecting shrapnel in his leg but managing to return to Lentini.¹⁰¹

Regrettably – and somewhat inexplicably – Allied air power failed to prevent the Germans from evacuating the bulk of their forces across the Strait of Messina, so that by the morning of 16 August only a small rearguard remained on the island. Thus, for the Germans, 'what was originally thought to have been an undertaking that would likely end in disaster had turned into a stunning success.'¹⁰²

Even as the enemy successfully withdrew, No 417 was re-equipping with new aircraft. Seven Spitfire VIIIs arrived with promises of more to follow, and, as the first few were delivered to the Canadians within a month of the new model's first appearance in the Mediterranean theatre, it suggested, more clearly than any memorandum could, that the AOC-in-C now viewed the squadron as a first-line unit. The Mark VIII was an improvement over the Mark V in key respects. Armed with two cannon and four machine-guns, and retaining the ability of the latter to turn tightly, it was faster (408 miles per hour compared with 369), and able to climb higher (43,000 feet compared with 37,000). These characteristics enabled it to match the best German fighters available in Italy (the Me 109G and FW 190A) until the introduction of the FW 190D later in the year.¹⁰³

On 21 August the pilots resumed operations with their new machines and, patrolling over the toe of Italy between Melito and Bagnara, they covered Kittyhawk fighter-bombers harassing enemy transport and communications. There was still no significant opposition from Axis fighters, but one Spitfire was hit by Flak over Bagnara, its pilot managing to bring his machine close to the Sicilian coast before baling out, where he was rescued unhurt by an army motor launch and its Sicilian crew.¹⁰⁴

On 2 September the 1st Canadian Division led the British Eighth Army in a virtually unopposed landing on the tip of the Italian peninsula, at Reggio di Calabria; and the next day a month of cloak-and-dagger negotiations concluded with signatures on articles of Italian surrender, to come into effect on the 8th. Hitler had foreseen that likelihood, and German forces in Italy were poised to strike. Rome was occupied, and all nearby airfields secured, while the disarming of Italian troops proceeded apace. In twenty-four hours the Germans were in control of northern and central Italy, despite another major Allied landing in the Gulf of Salerno, which lay close to the limit of the range of land-based fighter air cover and hence air superiority.

In Northwest Europe the events that unfolded in August and September 1943 were tinted with routine rather than drama, though beginning on 25 August the pace of Fighter Command's air effort quickened in the opening phases of Operation Starkey. The latter, which was to last until 9 September, ambitiously attempted to achieve two main goals: to make the enemy believe an invasion of the Pas-de-Calais was imminent, and so draw the German fighter force into the air at times and places advantageous to the Allies; and to rehearse some aspects of a genuine invasion, including air operations, ground logistics, and communications.¹⁰⁵

To this end, fighters, bombers, and coastal aircraft from British and American air forces would operate, once again, under the immediate direction of No 11 Group, at Uxbridge. Unlike Jubilee, however, Starkey would be controlled out of a combined Army/Air Operations Room under the ultimate authority of Lieutenant-General Sir Frederick Morgan, chief of staff to the Supreme Allied Commander¹⁰⁶ (and whose peculiar status revolved around the fact that there

was, as yet, no Supreme Allied Commander), even though any air activity that developed would be exclusively of the air-to-air variety.

In the event, the Germans were not fooled for a moment, as Morgan related with admirable honesty and no little embarrassment.

Out to sea we could see the Navy as usual delivering the goods. There were the minesweepers having swept channels right up practically to the muzzles of the German coast defence batteries which had displayed little interest beyond a few fortunately badly-laid rounds. Up Channel, in full view from both coasts came an impressive convoy of merchantmen that might well have been carrying the infantry of our invasion force instead of merely anti-aircraft armaments, as was actually the case in view of the possibility of hostile air attack. Down to the hards all along the coast marched streams of troops of which the main bodies turned about on arrival at the beach while their anti-aircraft armament embarked in the waiting landing craft and put to sea for a nice voyage in the *Skylark*. The sky reverberated with the roar of great formations of American and British fighters racing for the battle that they failed to find. We were told that a German coast artillery subaltern on the far shore had been overheard calling his captain on the radio to ask if anybody knew what all this fuss was about. Were our faces red?¹⁰⁷

Starkey was the first large-scale operation – it might better have been labelled an exercise – involving No 83 Group and the eight RCAF fighter and fighter-reconnaissance squadrons that made up half its strength. Though it did not persuade the Luftwaffe to risk its fighters in aerial combat, it did demonstrate that 'the flexibility of our present organisation allowed very large numbers of Squadrons to be transferred to and operated by No 11 Group with ease, rapidity and smoothness and with a minimum of paper work.'¹⁰⁸

As a training exercise, then, it was a success. But what of all the smaller versions of Starkey that had been the backbone of operations since Dieppe? Were they also no more than realistic training exercises? The Luftwaffe in Northwest Europe was weak by September 1943, and the *Circuses*, *Ramrods*, *Rangers*, and other air operations may have been partly responsible; but if one compares the Luftwaffe's sporadic reaction to Fighter Command's earnest endeavours over France with its desperate (and costly) efforts to bring down American bombers over Germany it becomes obvious that the latter was deemed the greater threat and combatting it worth the greater price.

Meanwhile, for the Germans, the general situation was more than worrisome. In the east the outcome of the disastrous Kursk offensive had allowed Russian armies to take the initiative they would retain until they reached Berlin; and over Germany itself the Combined Bombing Offensive was placing an increasing strain on Luftwaffe fighter strength. Though, as yet, the only place where the Americans and British were fighting on the ground was in Italy, their main blow, whose preparation was progressing apace, would inevitably fall on Northwest Europe, just as the Americans had always insisted. In striking that blow, air power would play a vital role.

Preparing for D-Day, 1943-4

At the Quebec Conference of August 1943, in often spirited discussions concerning the feasibility and timing of a cross-Channel attack, negotiators accommodated both British caution and American zeal to set a tentative date – the early summer of 1944 – for the invasion of Northwest Europe.¹ Staff officers now knew when land, air, and naval forces had to be ready to strike, and fighter pilots saw a shift in emphasis from a war of attrition to more prosaic preparations for invading the Continent. To that end, between November 1943 and February 1944 the RCAF day-fighter force would expand from ten to sixteen squadrons and diversify to include not only fighter and fighter-reconnaissance units, but also a Typhoon fighter-bomber wing as well as a high-altitude photo-reconnaissance squadron.

Allied planners were confident, and with good reason, for the air power they wielded was awesome, with about four thousand bombers and five thousand fighters available by D-Day. One component of this vast air armada, under Air Marshal Sir Arthur Coningham, was the Second Tactical Air Force, eventually composed of four groups: No 2 Group (previously part of Bomber Command) was made up of light bomber and Intruder forces, No 85 Group was composed of night-fighter and other miscellaneous units, while Nos 83 and 84 groups initially incorporated fighter and fighter-bomber squadrons from Fighter Command (soon to be renamed the Air Defence of Great Britain, or ADGB) and reconnaissance squadrons from the soon-to-be disbanded Army Co-operation Command. The RCAF fighter squadrons (except for No 402) and the three fighter-bomber units that had arrived in the United Kingdom between November 1943 and February 1944 – Nos 438, 439, and 440 Squadrons – all moved to No 83 Group,² making up about half its strength.

Also available for Operation Overlord would be the American Ninth Tactical Air Force, together with Coastal Command squadrons and heavy bombers from Bomber Command, and the bombers and escort fighters of the US Eighth Army Air Force. All of this might be seen as something of a sledgehammer to crack a nut, for the Luftwaffe was in no condition to put up much of a fight. By the autumn of 1943 'every fighter that the factories could produce [was] needed for the defence of the *Reich*,' while in October Ultra (decrypts of highly-sensitive German communications) revealed that the Oberkommando

der Luftwaffe had ordered replacement aircraft to be shipped directly from factories to the fronts – a sure sign that reserves were dangerously low. The much-battered enemy was now operating in the certain knowledge that he was greatly outnumbered on all fronts, a state of affairs aggravated by bizarre decision-making on the part of his high command. In August 1943, for example, General Dietrich Peltz and some of his bomber units were brought back from Italy, to IX Fliegerkorps, not to prepare to meet the inevitable invasion but for an ill-advised and inevitably ineffective aerial offensive against Britain.³

Meanwhile, German production between July 1943 and June 1944 could do no more than replace wastage, total strength remaining static at between 5000 and 5500 aircraft. Of those, 1500 to 2000 were deployed on the Eastern Front, some 750 on the Mediterranean and Balkan fronts, with a variable number undergoing repair or refit. That left a force of around 2000 aircraft to cover Northwest Europe and defend Germany proper. If replacing aircraft was a major challenge, replacing pilots bordered on the impossible.⁴

By the beginning of 1944 long-range, Merlin-engined North American P-51 Mustangs were escorting bombers of the US Eighth Air Force on daylight raids against targets which, in accordance with the Pointblank directive (see chapter 19), included aircraft factories and hydrogenation plants producing aircraft fuel. In March 1944, their range further boosted by jettisonable external fuel tanks and their numbers increasing month by month, the Mustangs were reaching Berlin and taking a heavy toll of German fighter pilots who were joining their operational units with far too little training to match the Americans in combat. The Luftwaffe was caught in a vicious and apparently irrevocable cycle of losses and shortages, requiring a reduction in training and reduced competence leading to ever more losses and even greater shortages. 'During the late spring [of 1944] standards fell still further when the B flying schools [roughly equivalent to the BCATP's Service Flying Training Schools] were disbanded. Fighter pilots went into action with only about 112 hours flying [experience].' Their Canadian counterparts would have accumulated three times that.⁵

Even if the Luftwaffe stayed on the ground, Flak provided its own hazards to Allied flyers. Rhubarbs, as always, were especially dangerous, and a memorandum prepared by Bentley Priory's senior air staff officer finally suggested that such operations tilted the attrition scale unduly in favour of the Luftwaffe. Losses to Flak were heavy when crossing the coast, in making a second pass at a target, or in attacking trains in stations and marshalling yards. Avoiding heavily defended areas and maintaining the element of surprise were thus critically important in ensuring a pilot's survival. The memorandum also complained that pilots were wasting their efforts on 'not worth while' targets like gun posts, ... signal boxes, railway wagons, and brick buildings, thus risking – and sometimes losing – their lives to no purpose.⁶

In early October staff officers calculated that, in 630 Rhubarb sorties, 9 per cent of committed aircraft had been destroyed or written off and another 5 per cent damaged; and though various ground targets had been attacked successful-

ly there was no definition by which the campaign as a whole could be termed 'successful'.⁷ In the end, however, the belief that a war of attrition was bringing the Luftwaffe to its knees predominated, so that Rhubarbs continued for the moment, despite casualties.

The three RCAF fighter-reconnaissance squadrons flew low-level photo-reconnaissance missions which, in many respects, were just as dangerous as Rhubarbs, though perhaps with more valuable results when things went right. No 430's experiences in November were typical; it flew six photo-reconnaissance missions, each with one aircraft carrying the cameras and another as escort. The first was an attempt to photograph four bridges over the Seine, which was only partially successful. Three missions that followed were total failures, the first because of oil on the camera lens (a common problem), the second because of cloud over the target area, the third when the camera-carrying machine, after having successfully photographed coastal batteries along the Dutch coast, developed engine trouble and crashed into the sea. The last two missions, to Caen-Carpique aerodrome (a place that was destined to play a significant part in First Canadian Army's Normandy campaign eight months later) and the Dutch coast, met with little Flak and no hostile aircraft, and returned to England with the required photographs.⁸

Escorting bombers, now the day-fighters' main role, was a different kind of war altogether. While Rhubarbs allowed fighter pilots to get into as much trouble as they chose, Ramrods compelled them to adhere to pre-flight briefings and keep to their assigned roles within increasingly complex fighter formations. Since Spitfire VBs could not compete with Me 109s and FW 190s above 19,000 feet, they were relegated to close escort work. Squadrons were thus always happy to shift to Spitfire IXs, which offered them a wider variety of roles, including free-wheeling diversionary sweeps which, had they been flown in another context, would have been classified as Circuses in their own right.⁹

Wisely, the Luftwaffe still only fought at times and places of its own choosing, preferring larger formations to deal with the aerial armadas the Allies were sending over occupied Europe. Even so, the Germans, showing tactical common sense, only carried out attacks if they thought they had the advantages of height and sun, as on Ramrod 237 on 22 September (an attack on Evreux aerodrome). No 416 Squadron was flying to starboard and slightly behind the bombers.

As the bombers approached the target Wing Commander Chadburn flying Black 1 saw 30 plus FW 190s and Me 109s ahead and on the same level as the bombers. The apparent intention of the E[nemy] A[ircraft] was a head-on attack on the bombers.

The Wing Commander took the Squadron in front of the bombers in order to break up this E/A formation. As they approached 12 of the E/A turned into them, the remainder turning off. Four or five of the E/A were firing head on into the Squadron.

Black 1 did a head on attack on the nearest a/c from about 400 yds. He saw strikes and explosions in the engine. As he broke off two other E/A following their No 1 fired

at the Wing Commander while the Wing Commander returned the fire of the leading aircraft of these two with a 2 second burst from 20 mm and m[achine] g[uns] and saw hits on the starboard wing.

Six E/A then came in from the starboard and the Wing Commander broke the Squadron into them. As they did so the Wing Commander saw one FW 190 streaming white smoke heading down towards Bernay. The six E/A then broke straight down and away from the squadron, the rest of the E/A were not seen.¹⁰

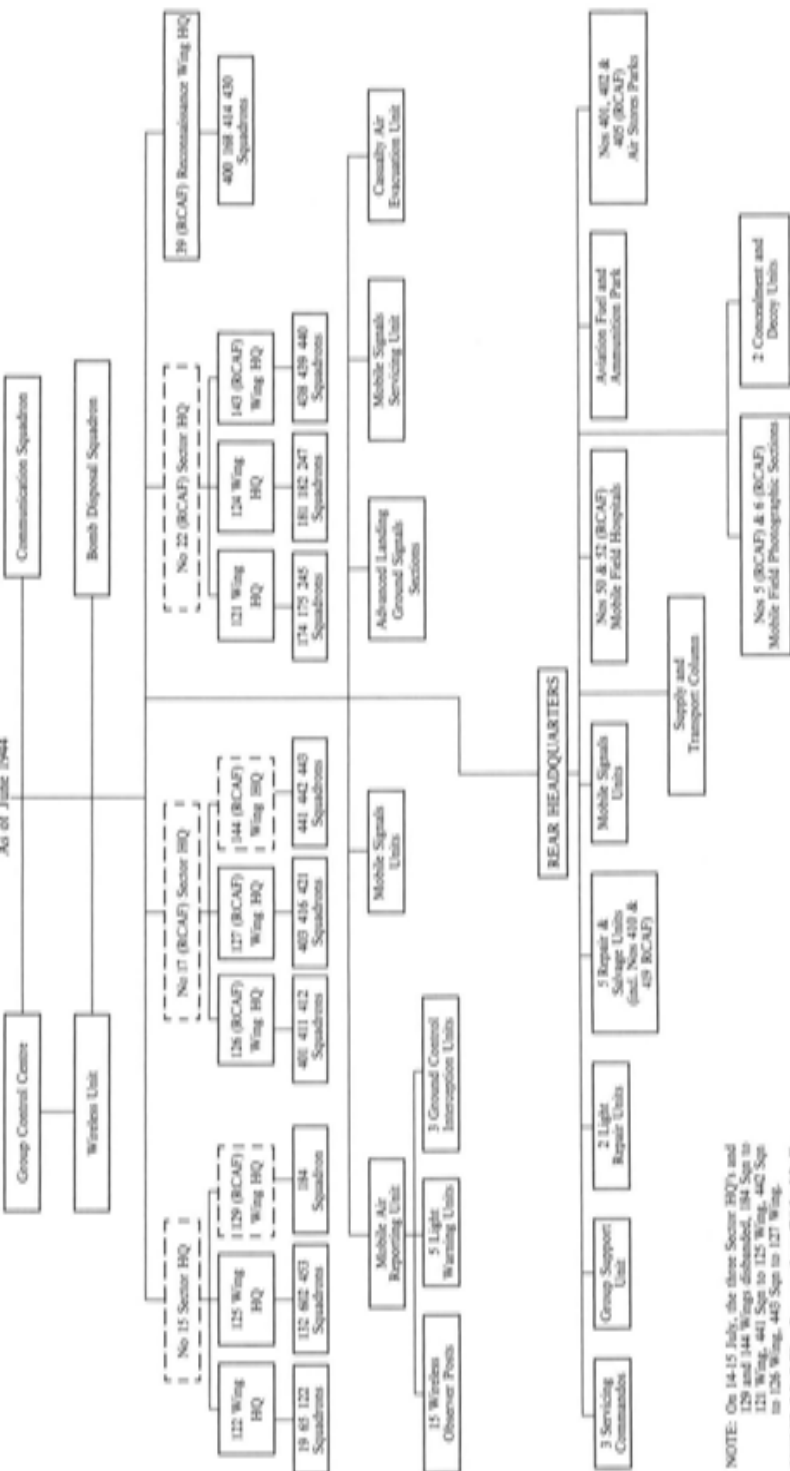
In spite of the above, there was little enough to shoot at; and, until the RAF/RCAF began to support Anglo-Canadian armies in Northwest Europe, much time would be spent in training. When the highest-scoring Canadian of them all, ex-RAF ace Flying Officer George Beurling, DSO, DFC, DFM and Bar, who had been credited with twenty-eight victories while flying in the defence of Malta during 1942,* joined 403 Squadron in September 1943, Wing Commander Hugh Godefroy suggested the best contribution he could make in his new unit would be to sharpen the marksmanship skills of the greener pilots. Beurling arranged a deflection shooting device with a model of an Me 109 mounted on a swivel post as it would appear at three hundred yards from the cockpit of a Spitfire. Andy Mackenzie (whose BCATP training was detailed in volume II of this series), one of the newly arrived pilots with no 421 Squadron, later recalled his lessons. 'He'd adjust the model and ask me to call off the angles. He'd say that the fleeing airplane is going such and such a speed and he'd move the model around to different positions, each time asking me to guess the angle. I made up a chart on a Sweet Caporal cigarette package and actually stuck it in the cockpit of my Spitfire. I studied it religiously.'¹¹ Mackenzie's education was to some purpose, as he was credited with three victories in his next thirty sorties, compared with his squadron's wartime average of one victory for every 138 sorties.¹²

At the level of operational planning, the change in strategy from defending the British Isles to using them as a base from which to invade the Continent was reflected in the RAF's reorganization of its fighter force. On 13 November the Allied Expeditionary Air Force (AEAF) was officially formed under Air Chief Marshal Sir Trafford Leigh-Mallory and, two days later, Fighter Command was dissolved, its tactical elements being apportioned between the Second Tactical Air Force (with its headquarters initially at Bracknell, in Berkshire, some thirty miles due west of London, and subsequently at Uxbridge) and the newly created Air Defence of Great Britain command. Among the Canadians, all but No 402 Squadron joined No 83 Group of Second TAF. (Why No 402 should have remained with the ADGB is a mystery, but even when it was rotated to the Continent some months later it was replaced by another RCAF squadron.) No 438 Squadron, recently arrived from Canada,¹³

* Beurling, from Verdun, Quebec, had joined the RAF in 1940 after being rejected for aircrew training by the RCAF because of his lack of education. He transferred to the RCAF on 1 September 1943, subsequently served with Nos 403 and 412 Squadrons, resigned his commission 16 September 1944, and was killed in a flying accident on 20 May 1948, while on his way to join the nascent Israeli Air Force.

No 83 (COMPOSITE) GROUP MAIN HEADQUARTERS

As of June 1944



NOTE: On 14-15 July, the three Sector HQ's and 129 and 144 Wings disbanded. 184 Sep to 121 Wing, 441 Sep to 125 Wing, 442 Sep to 126 Wing, 443 Sep to 127 Wing.

SOURCE: RCAF File - Correspondence Chief of Staff Committee, D80257, 181, 209 (D4206).

was also assigned to No 83 Group; it was one of six squadrons transferred from home defence in Canada to the fighting front as the threat to North America faded from exiguous to non-existent.

The possibility of sending more fighter squadrons to the European theatre had been discussed at the Quebec Conference in August 1943, when Sir Charles Portal and his Canadian counterpart, Air Marshal Lloyd Breadner, had considered a recommendation to disband four fighter and two army cooperation squadrons, equally divided between Canada's Atlantic and Pacific coasts, and to reform them overseas. Breadner was keen on increasing the Canadian contribution to No 83 Group which, at the time, he thought would be supporting First Canadian Army. Portal, for his part, gave assurances that the squadrons would remain intact and that the Air Ministry would keep their personnel 'as near one hundred per cent Canadian as possible.'¹⁴ 'They [the air staff] suggest that the squadrons, if sent, might be equipped and trained for the Fighter/Bomber role, and every effort would be made to associate them with the operations of the Canadian Army insofar as this can be achieved without prejudice to maintaining the flexibility of organization, between Fighter Command and the Composite Groups and between one Composite Group and another, which is essential to operational efficiency.'¹⁵

To the three squadrons in eastern Canada slated to go overseas the new policy was 'welcome news in units for which there had been little excitement in the way of enemy air attacks or landings, and whose only opportunity for action had been inshore anti-submarine patrols, a task for which the aircraft [Hurricanes] were ill-suited.' Thus No 123 (Army Co-operation Training) Squadron went overseas before Christmas 1943 to become 439 (Fighter-Bomber) Squadron, while Nos 125 and 127 (Fighter) squadrons became 441 and 443 respectively. The other three squadrons came from Annette Island, just north of Prince Rupert, where they had been guarding Canada's west coast from the threat of Japanese attack. With the Aleutian islands of Attu and Kiska once more in American hands, 'the role of the Annette squadrons had become increasingly inconsequential' and Nos 14, 111, and 118 squadrons therefore became Nos 442, 440, and 438, respectively.¹⁶

In late October, before any of the new squadrons had arrived, Fighter Command (which was still exercising a supervisory role over the embryonic ADGB and Second TAF) moved to ensure that the additional units would operate with Canadian staff officers and would form wings and airfields designated as RCAF. Deciding what role they would play proved far more difficult. In the August discussions, all six squadrons had been allocated to ground attack duties but on 11 November Leigh-Mallory, having been warned by the Air Ministry that Typhoons could not be produced at anticipated levels, decided that all six would be equipped with air-superiority fighters. Less than two weeks later, having received information that, in fact, enough Typhoons were available to equip three new squadrons, he rescinded that decision. Three units would be equipped with Typhoons, three with Spitfires.¹⁷

Maintenance, supply, and ancillary units were also tossed into the Canadianization cauldron. After further discussion concerning the Canadian contribution

to No 83 Group, the RAF agreed that three repair and salvage units, three air-stores parks, a mobile field hospital, and a casualty air evacuation unit would be formed from RCAF personnel. The people needed to fill these posts were to begin arriving in January 1944, and authority was later given for the formation of three mobile field photo sections of which two, Nos 5 and 6, would be RCAF units.¹⁸

Unfortunately, these British attempts to accommodate the wishes of their junior partner were based on shadows, for Second TAF's order of battle had not yet been established. Canadianization within No 83 Group soon reached the heights of complexity as many of the units the RCAF was planning to create turned into phantoms. The new organization, it turned out, would not have three repair and salvage units, but only two. Air-stores parks were also reduced, but No 406 would become RCAF while No 404's deficiencies would be made up from RCAF resources. Finally, Second TAF staff officers suggested that twelve mobile signals units become RCAF, two each in 17 Wing, 126 Airfield, 127 Airfield, 39 Wing, 128 Airfield, and 129 Airfield.¹⁹

At first those in No 83 Group who wore RCAF flashes on their shoulders could take pride in their relationship with First Canadian Army, for in June 1943 Sir Bernard Paget, C-in-C Home Forces, had informed General McNaughton that 'the plan now contemplated was that the Cdn Army would have its own assault divs under com[man]d, and would follow them in to enlarge the bridgehead.' No 83 Group, having been the first of its kind to form and consequently having the most experience, fully expected to support the assault forces in the forthcoming invasion, and that those forces would be Canadian. But there were clouds on the horizon. The dispatch of the 1st Canadian Infantry Division to invade Sicily that same month, and the decision to send the 5th Armoured Division to the Mediterranean in due course, threatened First Canadian Army's role as the assault formation for the landings in France, for Canadian components would be in short supply. In early September, however, Lieutenant-General Sir Archibald Nye, vice-chief of the imperial general staff, laid McNaughton's fears to rest. 'Gen Nye stated most emphatically that [the move of 5th Canadian Armoured Division] would not affect the Canadian Army, as it was very probable that Brit [formations] would be placed under [McNaughton's] com[man]d.'²⁰

There was much discussion in the months to follow about the part Canadians would play on D-Day, but there could be no final decision until a supreme commander arrived on the scene. McNaughton was unhappy with the aura of indecision, complaining that 'the whole set up was like mercury, very shifting and difficult to grasp.' Paget did nothing to clarify matters. On 19 October he stated that McNaughton's men would be part of a build-up and break-out force, but the following month he insisted that he was only presenting one possible course of action, as 'First Cdn Army might lead the assault in which conditions 1 [British] Corps might be placed under com[man]d First Cdn Army.' If so, it would not be commanded by McNaughton, who had resigned on 13 November, having lost the confidence of his superiors, British and Canadian alike. Finally, General Sir Bernard Montgomery, on his appointment as overall

ground commander for Overlord, put an end to all speculation in January 1944 by choosing Second British Army for the assault role.²¹

That decision had far-reaching implications for airmen as well as for soldiers, for the former now had to decide whether they wished to put national interests first and join their ground-bound brethren in a secondary role, or whether the RCAF should pursue its own interests as an institution and continue to support the assault formation as it had been (and still was) training to do. At a meeting on 30 January, Group Captain G.G. Truscott, the director of air staff at RCAF Overseas Headquarters, Air Vice-Marshal W.F. Dickson, RAF, commanding No 83 Group, and Group Captain D.M. Smith, RCAF, commanding No 39 Reconnaissance Wing, 'strongly recommended' that 'the RCAF participation in 83 Group should remain unaltered and that the Canadian Army should use 84 Group' in the forthcoming campaign. They reasoned that '83 Group has been developed as the initial striking force on behalf of the RAF.'

It has been in existence for eight months and during that time has been carefully developed and groomed for its role. With this in mind it has been given priority [in training and equipment] over 84 Group and is the only one that can be ready to do the job in the time available ...

The Units and Staff of 83 Group have been functioning together as a team for several months now and the splitting of that team by transfer of Canadian units to 84 Group would jeopardize the success of the operation ...

With reference to the agreement that Canadian Squadrons shall be used in co-operation with Canadian Army Forces it is pointed out that [the latter] will be part of the Second [British] Army in the initial assault. The First Canadian Army will exist principally only in name as a large portion of its force will be British.²²

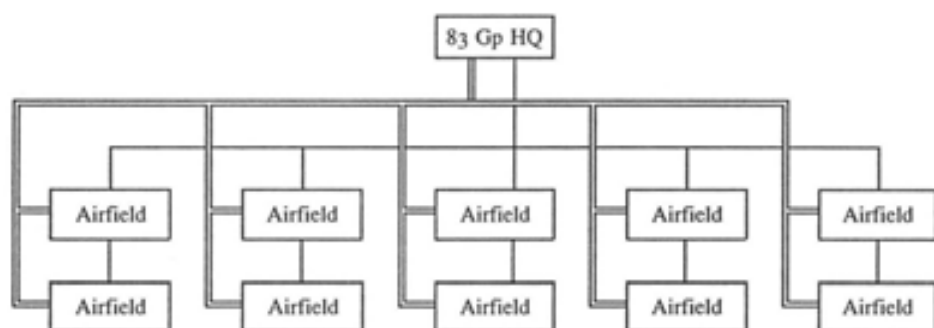
'It is felt that the fact that the Canadian Army has not been picked to launch the first assault is no good reason why the RCAF should relinquish its honoured position,' concluded Truscott, 'and actually, adds another reason why we should retain it.'²³ Air Marshal Breadner (who had been the RCAF's chief of air staff in Ottawa for the past three-and-a-half years but had just relinquished that appointment in order to take over as AOC-in-C, RCAF Overseas) accepted those judgements without demur, and the deed was done, without any reference to Ottawa. The tactical group which included all the appropriate RCAF units would work with Second British Army; the other, which included 'a large proportion of Polish, Czech, etc. Units' as well as RAF squadrons, would work with First Canadian Army.

Until they moved to the Continent, the squadrons of Second TAF were the administrative responsibility of the ADGB, so that by the end of February the RCAF fighter force was organized as follows: Nos 402, 441, 442, and 443 were based on 144 (RCAF) Airfield, though, for the moment, No 402 was Canada's sole representative with the ADGB while the other three were 'lodger' units with No 12 Group; Nos 438, 439, and 440 were based on 143 (RCAF) Airfield and were officially part of No 22 Wing, but lodging with No 13 Group. Nos 401, 411, and 412 were with 126 Airfield and Nos 403, 416, and 421 with 127

Airfield, all part of No 17 Wing; while, since October, Nos 400, 414, and 430 (with No 231 Squadron, RAF) had formed 39 (RCAF) Reconnaissance Wing, based at Redhill.²⁴ These sixteen squadrons represented the pinnacle of Canada's contribution to the fighter war.

Good communications were vital if Bracknell was to co-ordinate successfully the activities of such disparate squadrons fulfilling such varied roles. Air Marshal Sir Arthur Coningham, the AOC-in-C, concluded that No 83 Group carried too large a communications load, and his solution was to reduce the number of subordinate headquarters that would have to be involved in operational decisions. Airfields were paired so that, instead of having two airfield headquarters and a wing headquarters, the wing commander would control both airfields in operational matters through the senior airfield headquarters while the individual airfield organizations would continue to deal directly with group headquarters on administrative issues.²⁵

AIRFIELD ORGANIZATION, 83 GROUP



Lines of Command —————

Lines of Administration =

For example, 126 and 127 airfields would often be paired in the several campaigns to come, occupying the same areas as they made their way across Northwest Europe. Operationally, the headquarters of the senior airfield commander controlled both units.

While the organization of Allied tactical air forces was being revised to meet the requirements of Overlord, so was their list of targets. The Air Ministry still emphasized that rolling stock and locomotives were of primary importance, but the assistant chief of air staff for operations proclaimed on 26 November that, in future, attacks on them must fit into the larger plan. 'The policy of fighter attacks on the railway transportation system particularly locomotives, trains, and signal boxes in enemy occupied North-West Europe, has again been under consideration with all interested departments, and it has been decided that

attacks on these targets shall be discontinued forthwith. Attacks of this nature will in the future only be authorized when it is desired to immobilise communications in a definite area in support of a special operation, e.g. 'Overlord.' Your plans for this operation may, therefore, include provision for this form of attack if it is so desired.²⁶ Thus even Rhubarbs lost their free-wheeling flavour.

Indeed, they were soon almost extinct. To no small extent, policy-makers sought to maintain French goodwill in the lead-up to Overlord, and, at the end of November, Second TAF announced that 'attacks on the electric power systems of the leading industrial areas of France or the other occupied countries in NW Europe are not likely to produce any large or immediate effect on the enemy's war effort. Attacks will, on the other hand, create much distress among the civilian population and may prejudice the success of future military operations in those countries.' Rangers were increasingly substituted for Rhubarbs, with no more than four aircraft per mission in deep penetration raids to shoot down German fighters; not by enticing them to combat, but through aerial ambush as they taxied, took off, or landed in the course of training or routine flights.²⁷ Results were not encouraging.

If attacks on power stations were no longer acceptable, there was soon a new set of targets to take their place, which would have little or no adverse impact on the French. On 21 September 1943 Winston Churchill, in a speech to the House of Commons, had alluded to 'new methods and new weapons' that the enemy was developing. In early November photo-reconnaissance of the Pas de Calais revealed a number of suspicious sites whose most intriguing features were ramps that looked vaguely like ski-jumps, engendering animated debate as to their purpose. An answer came on the 28th, when a Mosquito pilot photographed similar sites at Peenemünde, the German rocket development centre, showing a diminutive airplane – too small to accommodate a pilot – apparently ready for launching.²⁸ On 2 December a panel of experts concluded that 'the enemy is experimenting with an expendable pilotless aircraft. If this is the aircraft which has been detected by reconnaissance at Peenemünde, which has a wing span of approximately 20 feet, it could carry an explosive charge of up to 1 ton of HE and reach the London area from the French coast ... [and] it seems highly probable that the "ski" sites in Northern France can be identified with pilotless aircraft and an attack early in the new year can be contemplated ... Until further evidence is available, the most practical counter measure is to bomb the sites'²⁹

This was Operation Crossbow, the air assault on V-1 sites which were code-named Noballs. Hitler had specifically commanded that the launch sites have maximum protection, for he was relying on the V-weapons to save his tottering empire, and emplaced to protect them were, quite literally, thousands of anti-aircraft guns. Reconnoitering and attacking such targets was hazardous at best and suicidal at worst, although providing high cover for bombers was rather less dangerous than doing the actual bombing. Reconnaissance was made doubly perilous by the need to photograph targets from no great height both before and after bombing, in order to assess damage. On the latter

occasions, at least, there would be little chance of catching the Germans by surprise.³⁰

One of the first Crossbow attacks involving the RCAF was on 20 December, when Nos 403 and 421 squadrons (127 Airfield), with Nos 401, 411, and 412 (126 Airfield), provided fighter sweeps to support attacks by more than a hundred Marauder light bombers in the morning and a similar group of Mitchells and Bostons in the afternoon. The Luftwaffe rose to meet them in some force; engaging 'eighteen Me 109s and twenty-plus FW 190s' over Merville, the squadrons of 127 Airfield claimed six aircraft destroyed, one probably destroyed, and three damaged in the morning sweep. Tragically, they also lost Squadron Leader J.F. Lambert, leading No 421 for the first time, who destroyed one of the Messerschmitts before being killed himself.³¹

Although his tenure in command proved brief, Lambert was typical of Canadian operational leadership at this time. The war was now in its fifth year and the problems that had once beset the RCAF in finding qualified and competent commanding officers for a quickly expanding force were things of the past. They had been largely solved by the harrowing processes of natural selection, and though many promising leaders had not survived the hazards of battle, and others had been trapped by the pitfalls of an impersonal and unfeeling administration, enough of their colleagues had remained operational to ensure that Canadian fighter squadrons were, on the whole, now very well led. Of the sixteen fighter units, nine would have the same squadron commander from the formation of Second TAF until D-Day. Of the others, No 411 had the highest turnover, with one killed in action, one injured in a flying accident, one – an American – transferred to the USAAF, and two coming to the end of their tours.* In all, twenty-six men served as Canadian squadron leaders during this time, of whom only two were repatriated owing to a perceived inability to lead their units – one, obviously unsuitable, having slipped through the selection net, and the other apparently the unfortunate victim of a hasty and arbitrary decision.³² In both cases the ready availability of other experienced leaders made them easy to replace.

Like so many of his colleagues, Lambert had been promoted and appointed on his proven operational merits rather than on background, training records, or paper qualifications for command. Raised in Winnipeg, he had been an audit clerk with a firm of chartered accountants when the war began. He enlisted in August 1940, passing through the BCATP pilot mill without distinguishing himself in any way. Indeed, on graduation he had been rated as 'unsuitable' for commissioning, and, after attending a fighter OTU in England, he had been posted to an RAF Spitfire squadron in July 1941, where he learned the fundamentals of his trade as a non-commissioned officer. In December he had been 'attached' to 402 Squadron (still flying Hurricanes, and out of the mainstream of the fighter war), and was commissioned in February 1942. Shortly there-

* Personnel officers, unaware of the exact date set for the landings (security surrounding Overlord was very tight) continued to post men out when they had completed two hundred hours, even if their experience would have been of great value during the initial stages of Overlord and they themselves had elected to stay on.

after, he was posted to another RAF Spitfire squadron, No 185 in Malta, when the siege of that island was approaching its climax.³³

In his brief sojourn there, Lambert only claimed one-and-a-half victories, but he served as a flight commander for a short time and his wing commander reported, 'he has shown great keenness and the ability to lead.' Shot down on 30 July 1942, he parachuted into the sea with 'slight' wounds to his right hand, arm, and shoulder, and when he came out of hospital it was time to return to the United Kingdom. There were no gallantry awards to accompany his departure, but he was assessed as 'a good fighter pilot'³⁴ by that eminently well-qualified judge, Air Vice-Marshal Keith Park, who had been one himself in the First World War, had commanded No 11 Group throughout the Battle of Britain, and was now AOC-in-C, RAF Mediterranean.

Back in England, Lambert became an instructor, where 'on arrival [he] was inclined to look on OTU as rest both physically and mentally. Worked hard latterly ... Rather untidy officer.' The last sentence of that assessment was shared by his next squadron, No 403, where the unofficial diarist reported that it was hard to recognize him when he appeared (for his wedding) with his hair combed and his buttons shone.³⁵ By that time Lambert had been commanding a flight for six weeks – there were no intimations he had but a fortnight to live.

He was succeeded by Squadron Leader W.G. Conrad, who had served in the Middle East with Nos 274 and 145 squadrons, being credited with three-and-a-half destroyed and receiving the DFC; Conrad had been shot down once, in the Western Desert in June 1942, but managed to rejoin his unit. In May 1943 he had been posted to No 403 Squadron, adding two more to his score, though almost falling into enemy hands after a collision with another Spitfire over France. Evading capture, he returned to Britain courtesy of the French 'underground,' taking command of No 421 in January 1944.³⁶

In the latter months of 1943 No 400 Squadron was more concerned with alterations in equipment than changes in command, spending far more time in training than on operations as it converted from fighter-reconnaissance work, in which it had used Mustangs for low- and medium-altitude missions, to becoming No 83 Group's photo-reconnaissance unit (PRU) on high-altitude Spitfire XIs and Mosquito XVI's. Two pilots arrived on 7 December to give instruction (on the ground, since the aircraft were single-seaters) for the Spitfire XIs, two of which appeared on the 22nd. The Mosquito flight began to take shape as the first navigators showed up on the 14th, and when Mosquito deliveries actually started on the 27th instruction could begin immediately. Meanwhile, the squadron continued to fly its operations in Mustangs, with ten Populars – twenty sorties – in December and twenty-six in January 1944. The flying-bomb sites may have been objects of great concern, but there were many other targets as well, and the first Crossbow photo-reconnaissance flight (by a Mustang) specifically labelled as a Noball was not until 2 February. The first Spitfire took off to photograph a Noball site on the 13th.³⁷

The turn of the year had brought No 430 Squadron to its first anniversary – with nearly double its establishment of sixteen aircrew on strength to cele-

brate the occasion, for trained fighter pilots were becoming as plentiful in the RCAF as they were scarce in the Luftwaffe. Two days later the squadron was taken off operations and sent north, to Peterhead in Scotland, to spend two weeks at an armament practice camp (APC) honing its shooting skills, as did all single-engined squadrons in preparation for D-Day. Quarters at Peterhead were 'pretty grim and cold,' and the mess was 'not too comfortable,'³⁸ so pilots were happy to get back to Gatwick and reconnaissance operations. Most were directed against airfields and bridges in that part of France embracing the Baie de la Seine where Overlord would be launched in mid-summer – although, of course, that was still the most secret of secrets, known only to the highest commanders and certain members of their planning staffs.

Between such missions there was unending participation in air/ground exercises. Exercise Eagle, in Yorkshire, meant that 'the cameras were "clicking merrily" from first light to dusk.'

'Enemy' concentrations were uncovered and reported for bombing attention, and information gathered on the movement and disposition of the 'hostile' forces ...

... One major lesson learned was the importance of having all the components of the fighter/recce organization close together. At Clifton the headquarters, photo section, Army photo-interpretation section and R[oyal] A[rtilery] counter-battery officer were all housed in the same block of buildings, with the result that the time spent in dealing with messages was reduced to a minimum. On the other hand, landline communications with the Army control were poor, so that much time was lost in getting information to where it was required.³⁹

Back in the real world, on 8 February 1944, things did not go too well, either.

[Flight Lieutenants J.H.] Taylor and [R.F.] Gill and [Flying Officers R.G.] Belli-Bivar and [C.E.] Butchart, carrying oblique cameras, were detailed for the bridge popular. After crossing the French coast at 6000 feet near Trouville, the section separated and, diving to the deck, headed for the targets. Taylor and Gill completed their assignment, the bridges over the Orne river south of Caen, and Belli-Bivar and Butchart photographed all but one of the bridges on the river north of Caen. Later in the day Butchart went out again with Taylor to take shots of the one bridge that had been missed. While Taylor was making his run light *Flak* opened up at him; Butchart spotted the gun position and 'pranged' it successfully. The two pilots then completed the mission and made their exit on the deck. On return to base, however, they found that by some strange gremlin interference no magazines had been inserted in the cameras and their sortie was in vain! The next morning Taylor and Gill tried again and this time the cameras were loaded and all went well.⁴⁰

Thankfully, such frustrating oversights on the part of groundcrew were rare; *Flak*, however, was not.

The long run-up to Overlord brought little excitement for day-fighter units. In the last few weeks of February most of the sorties to escort bombers were

simply “‘long stooge jobs’ – ask anyone who has sat for two hours in the restricted cockpit of a Spitfire how long 120 minutes can be and how cramped or weary muscles can get.’ Combats were rare, with Canadian pilots claiming only a single victory in February and averaging only five per month from January to March.⁴¹

Typhoon squadrons, whose main role was ground attack work, would eventually gain some proficiency in what was, to airmen in the United Kingdom, still something of an arcane specialty. In March 1944 there were questions as to how to train them, for it had been found impracticable to teach pilots the wide variety of roles assigned to the Typhoon (including rocket attacks, bombing, strafing, and smoke-laying). Coningham decided that squadrons must specialize, some as fighter-bombers, others as rocket-projectile (RP) fighters; though versatility was preferable in principle, a five-hour changeover time from rocket rails to bomb-racks (more than six hours to switch the other way) effectively excluded multi-purpose work.⁴²

By the time Nos 438, 439, and 440 squadrons arrived in Britain, RP Typhoons had already been allocated, so, by default, and together with four RAF squadrons from 84 Group, they were selected for the fighter-bomber role. As Typhoons were still in short supply and it was important to conserve them for the upcoming invasion, they were not to be used in bomber escort work. Nor were they to carry out indiscriminate offensive operations in small numbers; indeed, as far as possible Typhoons would be limited to one sortie a day, and would carry out Ranger operations only if they were carefully planned in advance and had No 11 Group's approval. On such missions, they would only be allowed to attack the enemy in the air and were not to attempt strafing airfields. All operations had to be planned with an exceptionally close eye on the weather in order to reduce the number of aborted missions, which inflicted unnecessary wear on the aircraft. In mid-March, and in such circumstances, the newly arrived Canadian Typhoon wing joined the air offensive.⁴³

Two of the new Spitfire Squadrons, Nos 441 and 442, carried out their first offensive sorties at the end of the month. The wing was under the leadership of Wing Commander J.E. Johnson, RAF – already one of the Commonwealth's top scoring aces and destined to accumulate thirty-eight victories – but on this occasion radio trouble forced him to hand over to a deputy.

Shortly afterwards the aerodrome at Dreux was sighted and as the Wing flew by on the west side many twin-engined aircraft could be seen in the dispersals. W/C Wells instructed No 442 Squadron, the top squadron, to remain at altitude as a decoy and as top cover, and himself led No 441 Squadron from up sun in to attack. The Squadron dived very rapidly to ground level on the south side of the airfield and made an extremely fast run across it at about 400 miles per hour, each pilot selecting his target on the run in. The Spitfires continued low down and fast for a couple of miles after the attack, then pulled up fast and reformed without any difficulty.⁴⁴

Johnson attributed the success of this first operation to the aerodrome's location, which was far inland and thus less likely to expect attack, and to the fact

that three wings of Fortresses had already gone by, returning from more distant targets, leading German anti-aircraft gunners to relax (they may also have been watching the decoy squadron). Further, the attacking aircraft were difficult targets, coming in out of the sun at high speed.⁴⁵

Such operations were still very much ad hoc affairs, for doctrine guiding the use of day-fighter and fighter-bomber squadrons in Overlord was not hammered out until March 1944. 'The primary role of Typhoon fighter/bomber squadrons will be attacks in close support of our ground forces using bombs or RP and cannon,' while 'the primary role of Spitfire and Mustang III Squadrons will be that of day fighting ... Their secondary role will be ground attacks using bombs and/or guns; bombing attacks are to be carried out by dive-bombing.'⁴⁶ Second TAF thus tried to strike a balance between the essential task of maintaining air supremacy and secondary responsibilities of interdiction and close support. Conspicuous in its absence was the matter of escort work, of the kind still practiced on Ramrods and Noballs, perhaps because the bomber's role in the upcoming offensive was still in question. Until 6 June, however, Ramrods continued to account for the bulk of RCAF day-fighter missions.

If fighters were to join the land battle by actually dropping bombs, then they would have to learn a new trade – dive bombing. Spitfires, designed for air fighting and with pilots trained in that task, could not do it well, as Hugh Godefroy's recollections make clear.

The target was to be approached at eight thousand feet. When it was opposite the wing tip, the aircraft was to be turned and dived at an angle of sixty degrees holding the bead of the gun-sight on the target. At three thousand feet a gradual pull-out was to be executed and on the count of three, the bomb was dropped ...

It wasn't long before we discovered that this technique of dive-bombing was extremely inaccurate. One could only take a guess at what was a 60° dive. Without dive brakes, Spitfires dived so fast that the hands of the altimeter went around in a blur. Pulling out at exactly three thousand feet with the use of an instrument that lagged was impossible.⁴⁷

Misses of from seventy to almost three hundred yards, depending on the angle of the dive, were the norm.⁴⁸ Unless bombing accuracy could be improved through relentless practice, any effect that dive-bombing would have was likely to be more of a nuisance than a serious ordeal for the Wehrmacht.

The first Canadian dive-bombing operation, against a bridge in northern France, was carried out on 8 June by No 440 Squadron's Typhoons, but results were poor, the bombs overshooting the target. The next day No 438 claimed to have done better; though one aircraft was unable to release its bombs, the others managed to attack with two each, the mission being 'carried out very successfully' with 'all the bombs being seen to burst in the target area.'⁴⁹ On 22 April No 416 pilots attacked Noball sites at Bonnières, in the Pas de Calais, and were 'amazed at their accuracy on this their first attempt.' That was an expression that might be interpreted in other than the obvious way, however, and the alternative meaning was probably the correct one. The AEF's Opera-

tional Research Section, after examining photographs, interpreters' reports, and pilots' claims, concluded that Spitfires required 90 to 180 sorties to lay a single bomb on a bridge (the figures for Typhoons were exactly half that), while RP-equipped aircraft, able to use their gunsights to aim their rockets, needed less than four.⁵⁰

At least the Luftwaffe could offer little opposition, lacking time, fuel, and skilled pilots as it attempted to gather strength to meet the invasion which now seemed certain in the summer of 1944. II Fliegerkorps, one of the Luftwaffe's most experienced close-support formations, moved up from Italy, while IX Fliegerkorps received reinforcements. X Fliegerkorps, an anti-shipping formation, was brought in from the Balkans and absorbed the units of Fliegerführer Atlantik, which ceased to exist. At the same time the torpedo-bomber units based in the south of France came under Fliegerdivision 2, which was also joined to X Fliegerkorps. Units that had been withdrawn from operations after being badly mauled in battles with American long-range fighters trained their replacement pilots in anti-invasion operations, veteran Heinz Knoke recalling that, in his squadron, 'every pilot has received extensive theoretical training in preparation for operations against landing-craft and transports.'⁵¹

The Oberkommando der Luftwaffe recognized that its forces would be outnumbered, regardless of what units it sent to the West, but pilots would be operating near their own bases and it was hoped that shorter distances-to-target would, in part, offset the Allies' numerical advantage. Formations-in-training prepared to operate in an emergency, while all fighters were equipped to act as fighter-bombers. It was all far too little and much too late to make up for years of bad planning and, according to one senior German commander writing after the war, 'the deployment of the Luftwaffe to defend against the invasion was a complete failure.'⁵²

The Germans were in no position to threaten Britain through aerial assault, and in the closing months of 1943, RAF/RCAF night-fighter crews could consider themselves fortunate if they made any contacts at all. A remarkable exception was a sortie by No 410 Squadron's Flying Officers R.D. Shultz and V.A. Williams (who had first flown together on 23 June 1943 and been credited with a Do 217 in their eleven sorties to date).⁵³ They took off on 10 December for a routine patrol over the North Sea.

After receiving the normal help from ground control, a visual [sighting] of a Do 217 was obtained at a range of 7000 feet and the Mosquito closed in rapidly to 150 feet, when the e[nemy] a[ircraft] fired a long burst and peeled off to port. The Mosquito was not hit and following the Jerry down got in a short burst which set the starboard engine on fire. The e/a continued evasive action losing height rapidly and at 9000 feet our pilot fired a long burst which resulted in a large flash and explosion on the starboard side. All return fire had ceased by now, but the Hun kept up evasion, trying to gain cloud cover at 7000 feet, however he went straight through it. The Mosquito followed and at 1500 feet the e/a steadied up, opened his bomb doors and tried to jettison bombs which were not seen to fall. Our pilot fired another long burst from

quarter astern and the Do 217 was seen to hit the sea burning furiously. After climbing as fast as possible to 15000 feet another visual of a Do 217 was obtained at 7000 feet range. F/O Schultz opened fire from dead astern at 900 feet and closed in. The e/a blew up when the Mosquito was 50 feet behind and our aircraft flew through the debris. There was no evasive action or return fire on the part of the e/a and our crew thinks the bombs must have blown up as a considerable jar was felt when the Dornier exploded. Immediately after this second combat our crew obtained a visual of a third Do 217 at a height of 12000 feet, range 7000 feet, 10 degrees to starboard. A long combat then ensued during which the enemy pilot showed a high degree of airmanship and F/O Schultz had to make every use of the manoeuvrability of his aircraft in order to follow him. The Mosquito fired a number of short bursts at the Dornier but even though both its engines were on fire the enemy pilot still took violent evasive action right down to sea level, while every available gun put out a defensive barrage. The Mosquito was hit in the nose while a cannon shell smashed the instrument panel just missing the pilot by three inches. The final burst caused the e/a's port engine to blaze and the Jerry eventually hit the sea going straight in. The Mosquito's starboard engine started to splutter and the pilot was about to feather it when the port engine picked up and after the port had been feathered the fire went out. The pilot managed to get his aircraft to Bradwell Bay on one engine despite the fact that his temperature gauges had been shot away.⁵⁴

Three victories in the course of a single sortie brought Shultz and Williams a DFC each. They would fly another thirty sorties together before completing their tours in late May 1944, claiming their fifth and last enemy aircraft on 13 February.⁵⁵

Meanwhile, those few bombers operating against the United Kingdom were mostly Me 410s and Ju 188s, faster than their predecessors and, to avoid detection, timing their raids to coincide with the return of British bombers from Germany. Intruders, which the Allies found so useful, went against Hitler's philosophy that 'terror is broken with terror, and by no other means,' so that, after a few operations in mid-to-late 1943, German aircraft and crews trained for intruder work were assigned to other duties.⁵⁶

On the night of 21/22 January 1944, in the midst of Bomber Command's assault against Berlin, the Germans launched their bombers on the first major attack of a new campaign – Fall Steinbock – 'when virtually every serviceable aircraft [462] in the west was ordered to bomb London.' The British capital continued to be a target through February, but in the three months that followed the Luftwaffe shifted its effort to ports and shipping, where it was far more likely to hinder Allied preparations for Overlord. Most of these attacks were pathetic failures, however, and the enemy's air resources proved incapable of forcing any significant delay on the Allied invasion build-up, achieving little more than the loss of 329 bombers.⁵⁷

For those whose task it was to oppose these attacks, the rules of night fighting had not changed – location and equipment largely determined success. No 406 was one of the units contributing to the German casualty rate, claiming its first victory on the night of 19/20 March when one Beaufighter was sent off

to investigate a radar contact over the Channel which turned out to be a Heinkel 177 fleeing to the south. The Beaufighter made a classic radar interception from the rear, closed to 'approximately 25 feet' before obtaining positive identification, and literally blew the bomber out of the sky, returning to Exeter with a windscreen covered in oil and the starboard aileron warped by the heat of the Heinkel's explosion. Eight nights later, during a major attack against Bristol, the Canadians managed to intercept and destroy two more. The diary noted that three victories in one week 'have caused great jubilation' among the air- and groundcrew, but at the same time the diarist complained that 'the inferior speed of the Beaufighter prevented several more kills.'⁵⁸

Lack of speed was certainly not a problem with the Mosquitoes of No 410 Squadron operating from Castle Camps, some fifty miles north of London. On the night of 3/4 February, Flying Officer E.S.P. Fox and his navigator, Flying Officer C.D. Sibbert, scored the squadron's first success of the campaign, the interception serving as an excellent example of the complexities new technologies, developed by both sides, had introduced to night air combat.

We were scrambled at 0400 hours under G[round] C[ontrol] I[n]terception Trimely ... Vectored 140° then over to [VHF radio] Channel 'G'; vectored 120°, then 100°. Given a 'bandit' crossing starboard to port. Contact obtained at 0430 hours, range 3 1/2 miles at 18,000'. Turning port we closed to 2,000'. The Hun was dropping window.* We lost contact temporarily and asked Control for help. Contact regained before a vector could come through. Range was closed to 200' with enemy aircraft doing very violent evasive action. I gave him a 1 sec burst, but missed as the Hun peeled off to starboard. The enemy aircraft was identified as a Do 217. We turned starboard, then port and contact was regained. The enemy aircraft was followed for 10 mins through very violent evasive action. Visual obtained. Range 1,000' at 13,000'. Closed to 200' and gave him a 2-second burst ... The Hun exploded and immediately went straight down in flames.⁵⁹

No 410 Squadron Mosquitoes were credited with the destruction of nine enemy aircraft during the four months of Steinbock, or one success for every thirty-eight sorties.⁶⁰

In March 1944, while still in the midst of fending off the bombers, night-fighter preparations for the invasion of France began, with 409 and 410 squadrons joining No 85 Group of Second TAF. For the time being, however, they remained under the operational control of the ADGB,⁶¹ to which No 406 was still permanently assigned. Early in May they were advised that their centimetric AI radar was now cleared for use over the Continent, and on the night of 28/29 May a Mosquito of 410 Squadron chased a Junkers 88 as far as Lille, where it shot the bomber down in flames.

For Typhoon squadrons, preparations for Overlord involved moves to advanced landing grounds.

* Radar-jamming chaff, known to the Germans as *Düppel*.

The camp at Funtington ... consists of two grass runways, an old farmhouse, taken over as [No 143] A[ir]F[ield] Headquarters, three blister hangars and some small shelter blisters which are being utilized for tools and ammunition. With the rain falling everything is a sea of mud in which personnel wallow as they put up tents, dig slit trenches and get settled down. Most of the tents, which were packed while still wet, leak profusely and the men are covering their blankets with raincoats. The airmen's mess is set up in a blister hangar and for the day many of the men are sitting on the floor. But all personnel are digging to make life as comfortable as possible, designing stoves from old petrol cans, setting up wash basins and stands for shaving. The nearest 'pub,' just 50 yards from the 438 Squadron Dispersal, is unable to cope with the Airfield demand and is already dry until Tuesday.⁶²

The fighter-reconnaissance squadrons endured similar hardships – though many a Canadian infantryman who had just spent an Italian winter alternating between soggy trenches and unheated farm outbuildings north of Ortona would have considered Funtington to be the lap of luxury.

What the Spitfire squadrons would do in the forthcoming offensive was not entirely certain, for the bomber's role was still in doubt and how bombers were used would determine whether the fighters would be needed for escort duties. The Allies were having difficulty in reaching a consensus on how to apply their abundant resources and, in early 1944, there was much debate as to which direction the air war should take. A meeting on 25 March, presided over by Portal and attended by Eisenhower, Leigh-Mallory, and the commanders-in-chief of the strategic bombing forces, settled the issue. Heavy bombers would continue to strike at German industry and morale, but would also assist the cross-Channel attack by destroying the railway system of Northwest Europe, in what was termed the 'Transportation Plan.'⁶³ The medium bombers of No 2 Group (now part of Second TAF) would also strike at transportation targets. Escort work would thus be the Tactical Air Force's main task until the troops set out across the beaches, the variety and intensity of such operations being demonstrated on the 27th, when RCAF fighters participated in four different Ramrods.

The first sent Bostons to attack Monceau-sur-Sambre in Belgium, Mitchells and Bostons to bomb a gun position near Cap D'Antifer, and Marauders to pound other coastal batteries in France, all with Spitfires to shepherd them. The second dispatched Mosquitoes against a Noball site, Mitchells to a railway junction at Serqueux (the Spitfires escorting the Mitchells were to dive-bomb the target afterwards), and more Mosquitoes in a low-level attack on another Noball. The third had Bostons and Mitchells (which No 443 Squadron described as Marauders) attacking the Bethune marshalling yards. Finally, Ramrod 803 sent Marauders and Bostons to hammer coastal batteries at Barfleur and Crisebeca, and the escorting Spitfires dive-bombed there as well.⁶⁴ Of course, had the Luftwaffe come up to fight before the Ramrods approached their targets, then the Spitfires would have had to jettison their bombs and turn to the work they had been designed for. It was a measure of the Luftwaffe's desperate straits that they did not.

Ramrod 804 the next day was a particularly complex affair, with Mitchells and Bostons of No 2 Group, along with Marauders, bombing the Nantes/Gassicourt railway, other Marauders attacking the Creil marshalling yards with Spitfire escort, Typhoons pounding Noball targets, more Typhoons sweeping through the Caen area, and two Mustang squadrons seeking out the enemy around Nantes/Gassicourt, though without seeing any combat. In May another dimension was added to the Transportation Plan when fighters were dispatched to attack trains in occupied territory; following medium or heavy bomber attacks on railway centres, some routes would become congested and fighters could increase pressure on the railway network by cutting up trains stranded on blocked lines. Attacks on locomotives, which in 1943 had done little but add to the fighters' casualty rolls, were slightly more effective in conjunction with the Transportation Plan although, in fact, heavy bombers attacking marshalling yards would account for 98 per cent of all trains destroyed.⁶⁵

Amphibious forces were training hard, and in early May they carried out the only full-dress rehearsal for Operation Overlord in Exercise Fabius. (There were actually six parts to Fabius, with the 3rd Canadian Infantry Division participating in Fabius III.) Nos 401, 411, 412, and 402 Squadrons provided low beach cover in Fabius I, while Nos 403, 416, and 421 Squadrons did the same in Fabius II, III, and IV. Nos 438 and 439 Squadrons participated in Fabius II and III, each providing twelve fighter-bombers to make dummy attacks on targets of opportunity. After the squadrons had completed their prearranged tasks on D-Day they would be available for close support, and on Exercise Fabius air staffs also rehearsed the procedures for allocating aircraft at short notice in order to meet army and navy requests for help.⁶⁶

From 1 April to 5 June the AEAf flew more than 3200 reconnaissance sorties, the RCAF fighter-reconnaissance squadrons contributing over 700 of them. The failure rate diminished, but only slightly; in May No 414 flew 142 Populars, of which ninety were fully successful and eight partially so. Of the forty-four failures, thirty were due to unfavourable weather and fourteen were blamed on technical problems, mainly engine trouble. Targets, such as railways, radar sites, communications centres, Noballs, and gun positions, reflected the variety of tasks allocated to the air forces as a whole in the month before the landings, while it was important to fly over all possible beaches along the coasts of France and Belgium in order to keep the enemy unsure of the Allies' actual plans. Oblique photographs of beach areas helped determine tactics and objectives for the troops going ashore, though they also revealed how difficult the task might be. Eisenhower, for one, found cause for reflection, as 'Pictures were studied and one of the disturbing things these continued to show was the growing profusion of beach obstacles, most of them under water at high tide.'⁶⁷

No 400 Squadron's tasks showed as much variety as in previous months, though its Mosquito XVIs were withdrawn and replaced with Spitfires in May, taking advantage of the increased supply of Spitfire XIs while the Mosquitoes could be used to form a reserve for No 34 Wing. In May No 400's reconnaissances included the areas around Caen and Bayeux, near the actual invasion beaches, but the squadron was also an integral part of the deception plan,

which called for twice as many operations in the Pas-de-Calais area as in the Baie de la Seine.⁶⁸ Deceiving the Germans was, however, only part of the reasoning behind attacking these targets, for they also included airfields and railway marshalling yards – the former accommodating aircraft the Allies would like to see destroyed, the latter able to funnel reinforcements west if they were still in good order when D-Day came.

Even before the lead-up to Operation Overlord, the Axis domain had been shrinking noticeably. In the Mediterranean, on 3 September 1943, elements of the 1st Canadian Infantry Division had led the Eighth Army's assault on the toe of the Italian 'boot' at Reggio di Calabria. The German High Command had decided the area was expendable, so the Canadians met with no opposition, the 3rd Brigade occupying Reggio before noon. The stiffest resistance of the day came from a puma, recently escaped from the bombed zoological gardens, which showed a carnivorous interest in the brigade commander. Within a week Canadian ground forces had advanced a hundred miles.⁶⁹

No 417 Squadron met with no greater resistance in the air as it protected Supermarine Walrus flying-boats on air/sea rescue work, escorted Curtis Kittyhawk fighter-bombers and Martin Baltimore bombers, and, through a series of standing patrols, sought to deny the enemy use of the air. Enemy fighters and fighter-bombers were spotted several times, at least once while dropping bombs on ground forces, but the Canadians were not able to bring them to action in the first days of the campaign.⁷⁰ It was not until 4 October that they met the Luftwaffe, Flight Lieutenant Albert Houle, DFC, later recalling the event.

We saw ten or twelve FW 190s bombing the harbour [in the Termoli area]. I was the only one successful in dropping my long-range tank. The others did not have enough speed, with their tanks on, to get into the fight. My goggles were sucked off my forehead when I opened the coop-top to clear condensation and they got caught in the slipstream. My head was bouncing like a Yo-Yo so I tore them off and from that time onwards flew without them ... I found out for certain that the Spit VIII could catch a 190 but in the dogfight the airscoop on my aircraft had closed and the resulting loss in ram pressure cut down my power and speed. Although I could still hold my own I couldn't close the distance to deadly range. The engine started to run rough due to too rich a mixture and lack of air. As I was deep into enemy territory and completely on my own I pulled back on the stick and climbed until the reduced pressure on the scoop enabled me to again open it, then turned for home with the trusty old Merlin engine once more running velvety smooth. I rejoined the remainder of the section over Termoli, finished the patrol and returned to base with them. When we got back the 190 was confirmed by the other boys who saw it go into the water off Vasto point. That was the first squadron victory since the Sicilian campaign had started, and the first time the Jerries had shown up with any consistency.⁷¹

There were often complications with jettisonable fuel tanks, the most common problem being the locking mechanism, which sometimes released the tank pre-

maturely and sometimes clung to it when the pilot desperately sought to rid himself of what was, in combat, an unwanted burden. Bert Houle again:

The failure of the other three pilots to get rid of their long-range tank was disappointing and could have been dangerous. We had been thoroughly briefed on how to get rid of them. They were hung below the cockpit by sliding a rear flange into two forward-facing hooks. The front flange fitted into two rear-facing hooks which could be tripped from the cockpit by pulling a lever. The only problem was that the air pressure sometimes held the tank in place even though the hooks were tripped. When the lever was released the hooks went back into place and again secured the tank. Our orders were to pull back on the stick slightly, thus pulling extra gravity so that the front of the tank dropped and the air pressure swept it away. In their excitement the other three pilots must have forgotten this manoeuvre and I was in the fight all by myself.⁷²

The weather deteriorated in November, forcing a significant reduction in operations. On the 25th, the Canadians moved to Canne, on the Adriatic coast, putting them within thirty miles of German positions along the Sangro River. 'The field here was a very small, rather hazardous strip running at right angles to the beach; high winds frequently swept down the coast, making cross wind landings on the single metal runway a difficult and tricky operation.'⁷³

The Eighth Army, including 1st Canadian Division, opened a rain-drenched offensive along the Sangro in late November. The attack was intended to draw German resources from the American Fifth Army front and thus ease the latter's advance up the Tyrrhenian shore. It failed, however, to reach its objective – the lateral road from Pescara to Rome – as tenacious German defenders gave ground slowly and grudgingly, the whole slogging match eventually climaxed by a bloody and bitter Christmas battle in the streets of Ortona.⁷⁴ During the offensive, No 417 and the other three squadrons of No 244 Wing patrolled the battle zone, hunting for German fighter-bombers. On 30 November a rare appearance by the enemy enabled the Canadians to claim two destroyed and one probably destroyed.

After a few minutes patrol ground control sent through two plots of eight and twelve e/a respectively and gave instructions to top cover to climb to 26,000 ft ... F/O 'Doug' Eastman's target disintegrated after he had fired twenty rounds from each cannon. W/O Johnny Johnson gave a FW 190 a short burst with his cannon. He closed in and gave it another burst. There didn't seem to be any reaction so he pulled up alongside it and saw that the cockpit was a mass of flames ... The FW turned over and dived into the deck. F/O O'Brian ... got in a burst at a FW 190 and started to follow it. With clouds of glycol streaming from its engine, it headed for the ground. However, he lost it in cloud and when he emerged, could only see a large puff of smoke on the ground in the general line of the e/a's flight. The rest of the Jerries jettisoned bombs and went nose down for home.⁷⁵

As 1943 drew to a close, the Canadians, now commanded by Houle, concentrated on four- and eight-aircraft patrols over the lines near Orsogna

and Ortona. During late December they expanded their repertoire to include two-aircraft Jim Crows – weather and so-called shipping reconnaissance missions (actually speculative anti-shipping strikes) – over the Adriatic, which led to the beginnings of a ground attack role for the squadron. On 8 January 1944 two pilots on a Jim Crow blew up a locomotive on the Dalmatian coast and four other pilots strafed a power station north of the German lines in Italy, and over the next few days the squadron completed a series of strafing attacks on trains, trucks, buses, and other targets of opportunity. Pilots had mixed feelings about such operations, Houle later reflecting: 'We expected to lose men. You must get down within reach of their guns in order to shoot, and it is always dangerous.'⁷⁶

On 22 January Anglo-American troops landed near Anzio, on Italy's west coast, behind Kesselring's main defences south of Rome. The Allies hoped to force a German evacuation of the Monte Cassino stronghold by this direct threat to his lines of communication, but excessive caution combined with quick and fierce German counter-attacks pinned the landing force into a tenuous lodgement. 'I had thought that we were hurling a wild cat on to the shore,' wrote Winston Churchill, 'but all we had got was a stranded whale.'⁷⁷

The landings at Anzio posed the kind of strategic threat that, from Kesselring's perspective, justified risking his meagre air strength as part of a coordinated effort to throw the Allies back into the sea. No 417, along with the other squadrons of No 244 Wing, was detached from the Desert Air Force – abandoning its role in support of Eighth Army – and moved to an airfield near Naples, where it was placed under the US XIth Air Support Command specifically to support the bridgehead at Anzio. It remained there for the next three months, almost all its work being standing patrols intended to frustrate fighter-bomber attacks against Allied ground forces and shipping in and around the beachhead.⁷⁸

No 417's performance over that time demonstrated the importance of leadership, proper training, and experience in creating an effective air weapon. Between 22 January and 29 March its pilots met the enemy in twenty-four engagements; they were never surprised, as they had been in North Africa, and generally they managed to achieve the advantages of height and speed. They were credited with nineteen German aircraft destroyed, while losing six Spitfires; and only one Canadian was killed, though several others were wounded.⁷⁹

A scheme developed early in April brought pilots and groundcrew much closer to the land battle as, in turn, each of the wing's four squadrons flew the final patrol of the day over the Anzio beaches and then, instead of returning to airfields near Naples, landed at the Nettuno strip, inside the bridgehead. The next morning that squadron flew the dawn patrol. In due course No 417 pilots returned to Marcianise with 'livid descriptions of guns thundering all night and spoiling their sleep'; and twelve ground crew got to share the experience when they volunteered for a two-week detail servicing the machines at Nettuno.⁸⁰

Air fighting began to peter out. German aircraft stopped their direct support of the Wehrmacht as the battle approached a stalemate – losses had become too prohibitive – and the Canadians encountered the enemy only twice during

April. This may have been fortunate, for the intense pace of operations at Anzio was taking its toll. There were plenty of replacement pilots available but the right kind of Spitfire was in short supply, and by early April losses had combined with normal operational wear to reduce the squadron's complement of aircraft from eighteen to twelve. Spitfire VIIIs, with their superior combat range and better handling at low altitudes, were unavailable and one flight was re-equipped for a short time with Spitfire IXs.⁸¹

Having done their share at Anzio, the squadron transferred in late April to the forward air strip at Venafrò, near Monte Cassino – a move that encouraged both air- and groundcrew to make slit trenches their first priority. They were soon put to use, for on 19 May ten Focke-Wulf 190s dive-bombed the town and the airfield, causing 'some amusing scenes on the Squadron as everyone dove for shelter when the bombs began dropping.' There was no lasting damage, and Spitfires of 145 Squadron caught the raiders, destroying one and damaging others.⁸²

Operations then settled into a routine until 12 May, when the US Fifth and British Eighth Armies – the latter now incorporating I Canadian Corps* – launched their spring offensive against the Winter Line. Two days later six Spitfires intercepted eighteen-plus Me 109s and FW 190s over Cassino, and in the confused mêlée that followed two of the German fighters were destroyed and three were damaged. One of the Spitfires was also shot down, but the pilot parachuted to safety.⁸³ Again, the squadron's success, while outnumbered three to one, was an indication not only of the Luftwaffe's growing weakness in pilot training but the greatly improved combat skills of the Canadians. By the end of the month (and into the first weeks of June) No 417's reconnaissance patrols were ranging north of Rome, in the vicinity of Lake Bracciano, though it encountered German fighters only once – as mentioned above – during the entire offensive.

Coordinated attacks from the Anzio bridgehead (after 125 days of isolation) and up the Liri valley, on the Cassino front, now convinced Hitler that a defence south of Rome could not be continued and he authorized a withdrawal to the north so that German forces could regroup.⁸⁴ Generalfeldmarschall Albert Kesselring, the German commander-in-chief, proclaimed Rome an 'open city'; Fifth Army units entered on 4 June 1944, but their accomplishment was quickly overshadowed by events eight hundred miles to the northwest – on the beaches of Normandy.

The launching of Operation Overlord was preceded by a month of highly intensive air operations. On 8 May one of the top priority items was the Douai marshalling yards, which were allocated to the RCAF's Typhoons, and leading the operation was Wing Commander R.T.P. Davidson, DFC, a Vancouverite who had joined the RAF in 1937 and served in every major theatre of war except the Pacific. Credited with five victories, Davidson had participated in

* Composed of the 1st Infantry and 5th Armoured Divisions, as well as the independent 1st Canadian Armoured Brigade.

the successful campaign to eject the Italians from Greece in late 1940, fought against the subsequent German invasion of the Greek mainland in April 1941, flown a Hurricane against the Japanese from Ceylon (now Sri Lanka) in the spring of 1942, begun flying Typhoons in April 1943, and taken command of 143 (RCAF) Airfield that autumn.⁸⁵ His DFC citation noted that he 'has displayed extreme keenness for ops.' This particular day 'dawned bright and clear though there was a heavy white frost. Nine aircraft from the Squadron, plus the Wing Commander, Flying, in another aircraft, departed for Manston at 0850 hours. At the last minute, W/Cdr Davidson's own aircraft became unserviceable [and had to be replaced]. Eight of these aircraft, having gassed up and bombed up at Manston, participated in an "ops" wing sortie against the marshalling yards at Douai, France. This is the farthest point that aircraft from this Squadron [No 438] have bombed. The results were very good, but the Airfield received a sad blow when W/Cmdr Davidson's engine cut out over France and he, presumably, made a forced landing.'⁸⁶ Davidson, having experienced mechanical breakdown twice in one day, was the only pilot not to return. There had been no Flak. He survived the landing, was rescued by the French 'underground,' and would emerge from hiding in September as the Allies moved through France, to add a Croix de Guerre to his DFC.⁸⁷

On 21 May Allied air forces intensified their attacks on the railway network in Northwest Europe, launching a total of almost seventeen hundred sorties. Second TAF and ADGB made their contribution, of almost four hundred sorties, through Ramrod 905. RCAF participation consisted of Nos 402, 403, 416, 421, and 441 squadrons. But fighters strafing moving trains were less effective than bombers attacking marshalling yards: of 159 locomotives claimed destroyed, the fighters of all air forces accounted for only three; at the same time, they suffered the highest casualties – including twenty-one RAF/RCAF aircraft and twenty pilots – representing 5.4 per cent of those committed. The Canadians lost four pilots, a slightly lower loss rate than ADGB/Second TAF as a whole. The next day, 'at long, long last,' the Luftwaffe came out to fight. No 416 dispatched its aircraft in sections of six (three pairs) instead of four, and reported: 'Things are really shaping up for the boys. The score for today was 4 more trains and (5) Hun aircraft, which were destroyed by F/Ls Forbes-Roberts, Mason, Patterson, F/O McFadden and P/O Palmer.'⁸⁸

The way in which the squadron diarist brusquely related five victories to five pilots makes air-to-air combat seem much simpler than it really was. In this case, three of the five actually saw their victims crash, but the other two claims were far more complex. Flight Lieutenant Mason managed a short burst at one aircraft but then came under attack from a second. All he could say about his victim was that he 'began to level out at tree-top level and went down into a large field at over 250 mph. I was right on the deck behind him and he did not come up from the field. I was unable to see him crash as the other aircraft was breaking in to me.' He claimed one success, however, because Pilot Officer Palmer had 'observed an aircraft crashed in a field, with a little smoke or dust rising from it but not being on fire.' Forbes-Roberts presented a similar problem, reporting that 'I saw one aircraft below me,

apparently taking off [from] a landing strip. I opened up and broke right and down on him, getting in two short bursts, first with machine gun only and then with machine gun and a few rounds of cannon. I saw two small strikes. He broke away from me due to my excess speed.' Forbes-Roberts claimed this aircraft as destroyed because Patterson had reported, 'During my attack I saw a single engined aircraft spinning about 500 yards away to my left about 500 feet,' and Palmer had 'sighted a parachute near the landing strip.' According to Forbes-Roberts 'this parachute could not have come from any of the other four aircraft which were destroyed, I [therefore] claim this one as destroyed,' ignoring the possibility that the pilot floating earthward had baled out of the same aircraft Mason had claimed.⁸⁹ Intelligence officers sifting through the information available could arrive at several possible conclusions. At worst, either the aircraft Palmer saw in the field had landed rather than crashed, in which case Mason's claim was void; or the aircraft had indeed crashed but the parachutist that led Forbes-Roberts to claim a victory had, in fact, baled out of it, in which case Forbes-Roberts's claim was void. In either case one would conclude that four German aircraft had been destroyed. Intelligence officers, however, were convinced by Forbes-Roberts's statement that 'this parachute could not have come from any of the other four aircraft,'⁹⁰ and credited all five pilots with kills.

As far as aerial gunnery was concerned, a new gyroscopic sight made it much easier for the average pilot to calculate the correct deflection angle in air-to-air fighting. Preliminary combat analysis in the early part of 1944 showed that the new sight had doubled a pilot's chances of bringing down an enemy; Spitfire IXs with the old reflector sight shot down thirty-four aircraft in 130 engagements, while those equipped with the gyroscopic sight destroyed nineteen of thirty-eight. However, many experienced pilots, Hugh Godefroy among them, who had spent years learning and developing their deflection shooting, preferred the old method. As Godefroy related after the war, 'I was too long in the tooth and set in my ways to change. I kept the gunsight shut off where the bead would stay in the middle and shot just the same as I always had.'⁹¹

'Train-busting' was now a daily occupation. On 23 May No 144 Wing (on 12 May 'Wing' was officially substituted for 'Airfield,' thus returning to a more familiar terminology)⁹² took off on a sweep to support a Fortress and Liberator attack on airfields, marshalling yards, railway stations, and an aircraft factory. Rodeo 295 involved twelve Spitfires from each of 441, 442, and 443 squadrons. The first two found little to do, but No 443 accounted for two trains.

When the Squadron was in the area west of Chartres a goods train was sighted and F/L I.R. MacLennan DFM shot it up. A few minutes later a passenger train was spotted and an attack was made but the first attempt was unsuccessful. Finally two aircraft from Blue Section led by F/L D.M. Walz dived from 13,000 feet and destroyed the engine and, in addition, what appeared to be a signal house or a blockhouse beside the railroad track was damaged. No enemy aircraft were sighted and the only Flak encountered was some light Flak in the Chartres area.⁹³

Spitfires were being called upon to carry out an ever-wider variety of tasks, and one could find no better example than Ramrod 942 of 29 May. The operation involved seven RCAF squadrons: No 402 escorted Bostons as they attacked the marshalling yards at Monceau-sur-Sambre; Nos 441, 442, and 443 (along with Typhoons of Nos 439 and 440) carried out dive-bombing operations against Noball sites; and Nos 401, 411, and 412 set their sights on various transportation targets, including three trains and a barge.⁹⁴ Thus the Spitfire, originally designed as a short-range interceptor, was being called upon by 1944 to work as an escort fighter, ground attack aircraft, photo-reconnaissance platform, and dive-bomber.

As May gave way to June, the first day of the month offered few opportunities to prepare for invasion since the weather (now of much concern to Eisenhower and his staff) allowed only eight sorties by RCAF fighter squadrons: two on weather reconnaissance, four on a defensive patrol, and two on escort duties, all uneventful. The following day was far better, No 143 Wing's Typhoons flying thirty-four sorties against targets around Le Havre. Of the reconnaissance squadrons, No 400 continued to fly exclusively on photographic sorties, while tactical reconnaissance (relying on the human eye and brain) made up the bulk of Nos 414's and 430's missions.⁹⁵

Meanwhile, the destruction of the Luftwaffe as a fighting force continued apace, not because of Circuses, Ramrods, Rodeos, or any of the other sweeps designed to entice its fighters into the air, but rather thanks to Operation Argument. Refining the policies arrived at during the Casablanca conference of January 1943, the Pointblank directive issued the following summer had established a combined bomber offensive aimed at the destruction of Germany's war potential through 'round-the-clock' bombing, with the US Eighth Air Force applying its doctrine of precision daylight bombing while Bomber Command concentrated on night-time area raids. Unknown and unconsidered at the time was the critical importance of Pointblank's intermediate objective, the attainment of air superiority.⁹⁶

The Luftwaffe, however, would not be destroyed in a knock-out blow inflicted by aerial bombing but in a desperate war of attrition of which the main instrument on the American side was the P-51 Mustang. This superb long-range fighter was not the result of any careful and considered prescription on the part of British or American air forces and designers, but the product of serendipity pure and simple. Originally developed for the Royal Air Force, its first generations were underpowered and hence, as we have seen, banished to the operationally less relevant Army Co-operation Command. The problem was the Allison engine, which produced less than 1100 horse-power; the solution was the dual-supercharged 1520 horse-power Merlin engine developed by Britain's Rolls Royce, in conjunction with the jettisonable long-range fuel tank. The result was an aircraft that could escort bombers on deep, daylight penetration raids, meet the enemy in his own airspace, and defeat him there.⁹⁷

Technology determines nothing in and of itself and is useless unless applied with intelligence and forethought. Though it had taken the US Army Air Forces something on the order of three decades to realize the vulnerability of

unescorted bombers, they now seized the opportunities the Mustang offered. In January 1944 General James H. Doolittle, commanding the Eighth Air Force, had changed the doctrine which guided American use of the fighter arm. No longer would the escorts' main task be to 'bring the bombers back alive,' but 'to destroy German fighters.'⁹⁸ The Mustangs were released from the invisible harnesses that had tied them to the bombers and they proceeded to engage their Luftwaffe counterparts wherever they could be found, often strafing them on their own airfields. 'Wherever our fighters appeared, the Americans hurled themselves at them. They went over to low-level attacks on our airfields. Nowhere were we safe from them; we had to skulk on our own bases. During takeoff, assembling, climbing, approaching the bombers, once in contact with the bombers, on our way back, during landing, and ever after that the American fighters attacked with an overwhelming superiority.'⁹⁹

The Germans also faced commitments elsewhere. The defence of the Reich came first but aircraft were badly needed on the Eastern front, where the Luftwaffe was still heavily involved in the first half of 1944 trying to stem a Russian advance into the Balkans. Casualties there were less severe, however, so 'the Luftwaffe used Russia as a school for inexperienced pilots.' (The situation would get far worse when the Russians launched their major offensive against Germany proper, exactly three years after Barbarossa.) By the end of May the Germans had 891 aircraft in France, of which 497 were serviceable, to face the nine thousand the Allies could muster against them, five thousand of them fighters. Additionally, a coded order was supposed to throw almost all units defending the Reich into the anti-invasion battle, thus giving the Luftwaffe another six hundred aircraft – still a pitiful force – to fight off the Allies.¹⁰⁰

Anti-aircraft deployment was more promising, as many an RCAF pilot could testify. On their western front (including Germany) the Germans had available over 22,000 light and medium and almost 11,000 heavy guns, as opposed to some 8000 and 4000 respectively, in Italy, the Balkans, and the East. Maintaining and operating them and their radar systems required the services of over a million men, women, and boys, who had to be housed, fed, and munitioned. Moreover, anti-aircraft artillery was defensive in nature, and the Luftwaffe needed fighters, fighter-bombers, and ground attack aircraft if it was to thwart Allied ground and naval forces. Unfortunately for the Germans, 'when June, 1944, eventually arrived, the Allies possessed so great a preponderance of strength in the air that nothing but a major blunder or deliberate treachery could have prevented success.'¹⁰¹

The Normandy Campaign, June–August 1944

'One evening ... the sky over our house [at Taunton, in south-western England's Somersetshire] began to fill with the sound of aircraft, which swelled until it overflowed the darkness from edge to edge,' wrote British historian John Keegan, recollecting from his childhood the eve of Operation Overlord. 'Its first tremors had taken my parents into the garden, and as the roar grew I followed and stood between them to gaze awestruck at the constellation of red, green and yellow lights which rode across the heavens and streamed southwards towards the sea.'

It seemed as if every aircraft in the world was in flight, as wave followed wave without intermission ... The element of noise in which they swam became solid, blocking our ears, entering our lungs and beating the ground beneath our feet with the relentless surge of an ocean swell. Long after the last had passed from view and the thunder of their passage had died into the silence of the night, restoring to our consciousness the familiar and timeless elements of our surroundings, elms, hedges, rooftops, clouds and stars, we remained transfixed and wordless on the spot where we stood, gripped by a wild surmise at what the power, majesty and menace of the great migratory flight could portend.

Next day we knew. The Americans had gone. The camps they had built had emptied overnight. The roads were deserted. No doubt, had we been keeping check, we would have noticed a gradual efflux of their numbers. But it had been disguised until the last moment and the outrush had been sudden. The BBC news bulletin told us why. 'Early this morning units of the Allied armies began landing on the coasts of France.'

As the Keegans bore witness to the opening stages of Overlord, Spitfires of Nos 401, 416, 441, and 443 Squadrons shepherded convoys setting out from southern English ports towards the Norman shore. Their patrols were uneventful, and only No 418 (Intruder) Squadron, which spent some hours of the night attacking German airfields and Flak posts in northwestern France, could report any excitement; of its nineteen crews, eighteen flew on missions in 'the greatest single-night's work ever performed by the squadron,' and though one Mosquito, hit by Flak, was forced to crash-land, its crew walked away from the wreck.²

The Allied air forces met with no opposition in the air, for the Luftwaffe had become a mere shadow of its former self, with no hope of stemming the Allied tide. Stationed within range of the Baie de la Seine and the Cotentin peninsula were the formations of Luftflotte 3, with a theoretical fighting strength of 481 aircraft, of which sixty-four were for reconnaissance and only a hundred were fighters; but on D-Day 'not more than 319 aircraft could meet the enemy,' compared with the eleven thousand that the Allies had allocated to Overlord – an overwhelming ratio of about thirty-five to one in favour of the latter. Moreover, orders for the transfer of formations from other areas to help deal with the immediate threat (an operation that had been planned in some detail months before) were not even issued until the following day, such was the uncertainty and disquiet in German headquarters.³

Canadian fighter pilots were thus witnesses to the epic events unfolding on the beaches, but they had little else to do but watch.

At 2330 hours on the night of the 5th the pilots had been called together for a short address by Group Captain W.R. MacBrien, which was followed by an intensive briefing lasting until 0130 hours. Two hours later the pilots were roused and the Squadrons put in a state of readiness. At 0620 hours No 127 and No 144 Wings took off, with both Group Captain MacBrien and W/C L.V. Chadburn flying with 403 Squadron, a total of seventy-four aircraft, No 127 Wing to patrol the western and No 144 Wing to patrol the eastern section of the landing area ... but there was no sign of the enemy aircraft and relatively little Flak, except from Le Havre at the eastern end of the patrol. The wings returned to land at base at approximately 0820 hours, shortly after No 126 Wing with thirty-seven aircraft had taken off for the second stage of the beachhead patrol.⁴

In the course of the day only two RCAF squadrons reported contact with the enemy: No 442 sighted, but was unable to attack, two FW 190s, while No 401 climbed to intercept a formation of over twenty aircraft which also turned away before the Canadians could engage them. 'While the Squadron was climbing to ward off this danger, a lone enemy aircraft sneaked through the hole in the "umbrella," dropped a single bomb on the beach and made good its escape,' in one of only two instances where German fighter-bombers succeeded in attacking the bridgehead.⁵

The Allies had expected to launch an average of four sorties per day per aircraft in the initial stages of the invasion, but Luftwaffe inactivity diminished the need for intercepts and patrols and, in the event, only 1.28 sorties per aircraft were carried out on D-Day. That average rose to 2.28 on D+1, the nine RCAF day-fighter units with No 83 Group spending many a tedious hour patrolling over the crowded (and scrap-strewn) beaches, where they were joined by No 402, still with the ADGB. For most units, the daily program called for four patrols over the beaches, each of two hours' duration.⁶

On D-Day the three Canadian Typhoon squadrons – bomb-carrying Typhoons were colloquially known as Bombphoons – had been among the busiest units in the AEAf, each flying three ground attack missions. First, with

twelve aircraft each, they had attacked beach defences in conjunction with the initial assault. From left to right, as one looked across the Channel towards the French coast, landing areas had been divided into five beaches: Sword (British), Juno (Canadian), Gold (British), Omaha (American), and Utah (also American). No 438's task was to hammer two concrete blockhouses overlooking Gold beach, near Le Hamel, where the British 50th Division led the assault. Just after the landing ramps were lowered, No 439 attacked two strong points on Juno beach, moments ahead of 3rd Canadian Division's assault brigades, while No 440 bombed Sword beach and swept inland to strafe a suspected 88 millimetre gun position. A second operation that afternoon found the Typhoons bombing targets of opportunity around Caen, but the few they found were of little significance. Eight aircraft from No 440 directed their attention and their bombs on one of the roads, wrecking one truck and damaging another; eight from No 439 simply jettisoned their bombs; and nine from No 438 attacked three armoured cars, registering near misses while suffering damage to one aircraft from Flak.⁷

So far they had operated without serious casualties, but their luck would run out on the final flight of the day, an early evening armed reconnaissance of the Caen area. No 440 dispatched eight Typhoons which located some enemy transport and destroyed two trucks with bombs and strafed two others, but one aircraft was badly hit by Flak and had to crash-land back at base while another was holed in its fuel tanks and was forced to land at an alternate field; a third pilot failed to return – his grave would be found on 29 June. No 439 had the good fortune to find an armoured column, either of the 12th SS or 21st Panzer Division, which it attacked with bombs, while eight aircraft from No 438 attacked four trucks and strafed a column of troop carriers. Several machines were slightly damaged, but all returned safely. No 440 Squadron was the hardest hit of the RCAF units on D-Day, losing three aircraft and one pilot (No 430 was the only other Canadian squadron to lose a pilot, also in the early evening).⁸

Trying to impose order on the natural chaos characteristic of such activities were Fighter Direction Tenders and Headquarters ships. The former directed day-fighters onto Luftwaffe formations whenever these units made their rare forays over the invasion areas, while the latter gave instructions to the fighter-bombers and aircraft engaged in tactical reconnaissance. Unlike the catastrophe at Dieppe, two years earlier, these controllers had direct communication with the pilots overhead at all times. Tenders and ships were moored in the roadstead in the centre of the British and American beach areas and, as there was too much beach (about eighty miles' worth in total) for a single controller to cover, the British and Americans each had their own network.⁹

Late that night, Prime Minister Winston Churchill telegraphed his contentious ally, Josef Stalin, to report that 'everything has started well. The mines, obstacles, and land [coastal defence] batteries have been largely overcome. The air landings were very successful, and on a large scale. Infantry landings are proceeding rapidly and many tanks and self-propelled guns are already ashore.' As for Second British Army, it had suffered over four thousand casualties