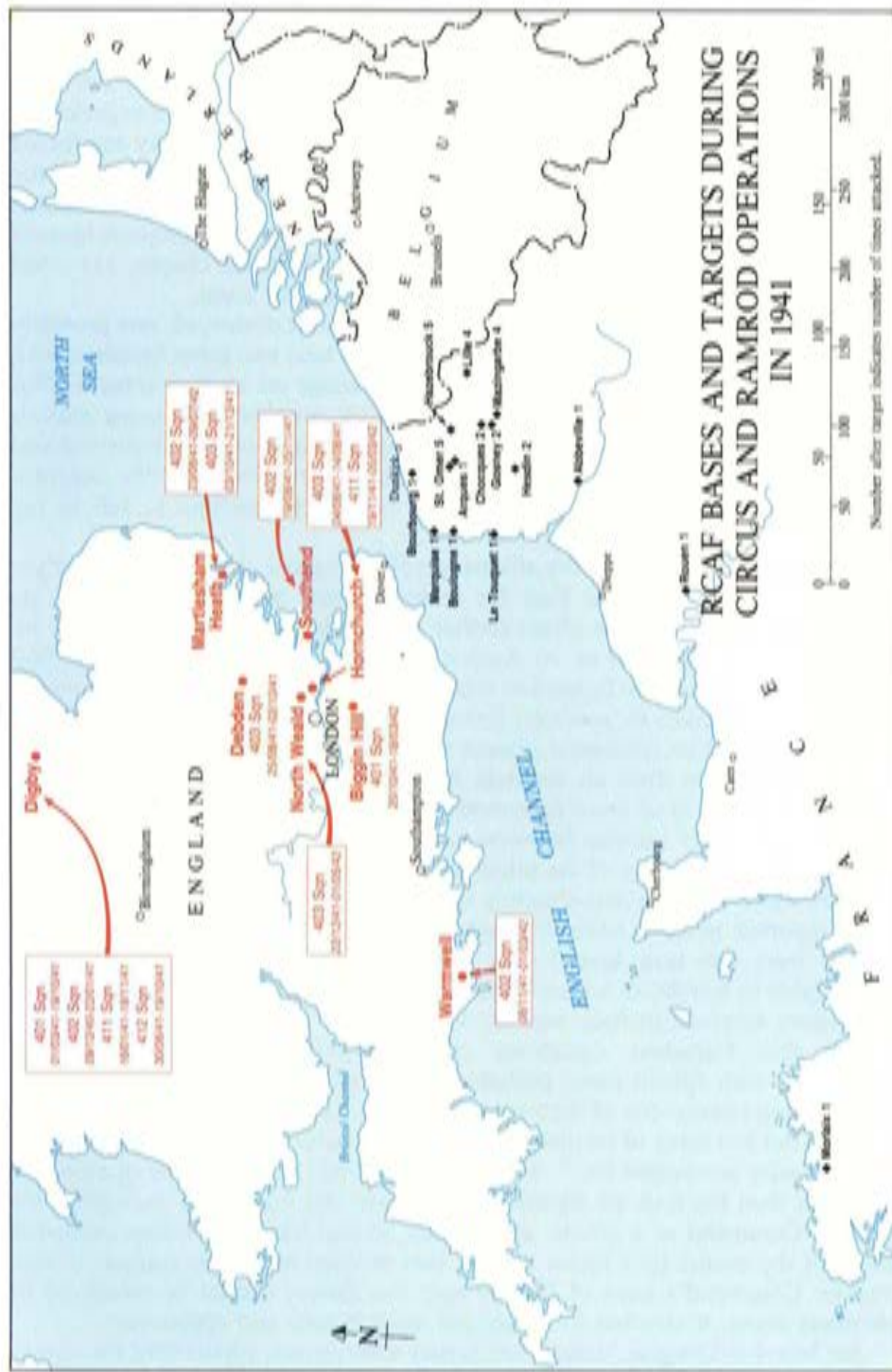


was telling the secretary of state for air: 'Our engines are still liable to temporary failure in flight under negative 'G' conditions. Although many attempts have been made to eradicate this defect from the standard type of carburettor and to develop and produce injection type carburettors which function perfectly at all altitudes, our latest type, the Spitfire IX, is still affected by this serious drawback. This defect is in fact the practical fighter pilot's chief bugbear at the present time.'³⁰

After only two months on operations Trevena was posted out and shortly afterwards returned to Canada, where he would be discharged on medical grounds in October 1943. He was replaced by Squadron Leader J.D. Morrison, who was 'well qualified to command a squadron both from the point of view of flying and administration.' Morrison, who had been granted one of the RAF's first short-service commissions in 1939, had also gone overseas with No 110 Squadron in February 1940, then served briefly with 85 Squadron, RAF, and had been promoted to flight lieutenant, joining No 1 (subsequently 401) Squadron, RCAF, in November, just after the Battle of Britain. He would retain command of No 412 until killed in action on 24 March 1942.³¹ His death merely re-emphasized the difficulty of establishing effective squadron and wing leadership in the early and middle years of the war – all too often, leaders and prospective leaders, fighting under grave disadvantages of one form or another, were killed before they could realize their full potential.

To complicate the lives of those who organized training and developed tactics (not to mention the pilots trying to master their dangerous trade), the Luftwaffe began introducing a radial-engined fighter, the Focke-Wulf 190, towards the end of September 1941, as 401 Squadron was converting to Spitfire Vs. This new machine demonstrated all the advantages of the 109F as well as a phenomenally rapid rate of roll – perhaps the most useful of all combat manoeuvres. 'When the FW 190 was in a turn and was attacked by the Spitfire, the superior rate of roll enabled it to flick into a diving turn in the opposite direction. The pilot of the Spitfire found great difficulty in following ... A dive from this manoeuvre enabled the FW 190 to draw away from the Spitfire which was then forced to break off the attack.'³²

By mid-October No 401 Squadron was operational on its Spitfires and was promptly shifted south again, to join two RAF squadrons in the Biggin Hill wing of No 11 Group. Those pilots who had flown with the squadron in the Battle of Britain had, however, moved on or become casualties, and now their successors had a rude introduction to offensive operations when the wing set out on a Rodeo over the Pas de Calais on 26 October 1941. Approaching the French coast, one of the other squadrons peeled off to investigate four aircraft flying below them which turned out to be Spitfires. Unfortunately, 'the manoeuvre tended to disorganise the wing formation which also had to contend with a strong following wind which blew them inland.' Trying to re-establish some sort of cohesion, the Canadians then 'orbited with the Wing south west of Nieuport, the formation becoming loose and the sections far apart,' which only made matters worse.



As they turned for home, 'very considerable numbers' of enemy aircraft attacked the now widely scattered formations. 'The greatest losses were suffered by 401 Squadron who, probably through inexperience, may not have been keeping a look-out as strict as would have been kept by more experienced pilots,' adduced the wing intelligence officer, a conjecture readily reinforced by the report of one pilot who only became aware of the enemy as the machines on each side of him fell out of the sky. Five Canadians were killed or captured – one of them, Pilot Officer Wallace Floody, to distinguish himself subsequently in the 'Great Escape' from Stalag Luft III (see chapter 21) – and another parachuted to safety after reaching the English coast.

The squadron was credited with one Messerschmitt destroyed, one probably destroyed, and two others damaged. A few weeks later two more Spitfires were lost, but the Canadians gained a measure of revenge on 22 November as Nos 401 and 72 squadrons encountered 'considerable numbers' of enemy aircraft and the former claimed four of them destroyed, one probably destroyed and four damaged. Two of those shot down were the new Focke-Wulfs, Sergeant J.A.O. Lévesque being credited with the first such machine to fall to the RCAF.³³

Meanwhile, doubts about the offensive's effectiveness, deteriorating weather, demands from the Middle East for more fighters, and stabilization of the Eastern front combined to effect further policy changes before winter set in. The AOC-in-C's proposal of 29 August 1941 was adopted and *Circuses* and *Ramrods*, which tied the fighters to relatively slow-moving bombers, were now only to be undertaken in 'specially favourable circumstances,' while 'a rigorous offensive should be continued against shipping and "fringe targets."' ³⁴

It is difficult to draft an accurate balance sheet measuring the degree of success or failure in all these operations. The only acceptable numbers concern the five-and-a-half months between 14 June and 31 December 1941, when Bentley Priory lost 395 of its pilots killed, taken prisoner, or missing (with another sixteen lost on anti-shipping strikes). In exchange, 731 enemy aircraft were reported to have been destroyed, but actual Luftwaffe losses from all causes were (we now know) only 154, of which fifty-one were not even attributable to RAF/RCAF action;³⁵ probably at least half the Germans who were shot down survived to fight another day.

The five Canadian squadrons claimed twenty-two enemy machines destroyed, with fifteen more probably destroyed and twenty-eight damaged, while losing twenty-one of their own pilots – No 412 claimed only *one* enemy aircraft, but lost three of its own – but it is impossible to determine the number they actually accounted for.³⁶ As the RCAF claimed a lower ratio of victories to losses than the RAF, its figures are probably less inaccurate than those for Fighter Command as a whole, and it may be that Canadian losses exceeded those of the enemy by a factor of only two or three to one, as compared with Fighter Command's ratio of four to one. But failure cannot be measured in numbers alone: it also has to be gauged against aims and objectives.

Air Marshal Douglas, despite his earlier reservations concerning the nature and style of the offensive, had by now adopted a more positive stance in this

regard. In taking the initiative the RAF had gained a moral ascendancy over the Luftwaffe, he argued, a conclusion remarkably similar to (and just as mistaken as) that reached by Sir Hugh Trenchard to justify his heavy casualties when he was commanding the Royal Flying Corps on the Western Front in 1916 and 1917.³⁷ As for the efforts to limit German reinforcement of the Eastern front, and even to draw some formations back from the east, the AOC-in-C claimed partial success. While he admitted that the Luftwaffe had not been pressured to withdraw any air units from Russia, his pilots, he suggested, had kept significant numbers – two top-quality Geschwader amounting to some 260 fighters – in northern France.

With fifty years of hindsight, however, it seems reasonable to assume that the retention of so few fighters and rather more pilots to oppose the approximately 1200 machines and many more pilots then available in the United Kingdom was a minimal precaution on the enemy's part. Douglas acknowledged that it was 'most unlikely that, even without the offensive, the Germans would altogether have denuded the Western Front of fighters,' noting that 'so long as even the threat of an offensive was present, a substantial defensive force would doubtless have been retained in the West in any case.' He concluded, rather lamely, that: 'One of the clearest lessons which was later seen to emerge from this experience was that fighters operating from this country over Northern France could, at sufficient cost, inflict such losses on the opposing fighter force as would bring about a local and temporary air superiority. But this achievement could, of itself, have no decisive military value: the ability to create this situation was valuable only if means were at hand of exploiting it by some further move capable of producing a decision.'³⁸

On the far side of the world another powder keg had exploded, and shock waves struck the RCAF Overseas as well as Canada's Home War Establishment and Western Air Command. The Japanese invasion of Malaya, paralleling attacks on Pearl Harbor and the Philippines from 7 to 10 December 1941, led the British chiefs of staff to call for fighters from the Mediterranean theatre to be sent to India, in order to bolster British defences there. At the same time, Middle East Command needed all the fighters it could muster to restrain the Luftwaffe which, despite its lesser numbers, was currently maintaining air parity – and sometimes air superiority – over the RAF in the Western Desert, largely by virtue of its tactical edge. The CAS 'made promises of large reinforcements which should arrive in the Middle East by the end of April.'³⁹

That commitment was made just as Air Vice-Marshal Harold Edwards – who had replaced L.F. Stevenson in London with orders from Ottawa to 'put the RCAF on the map' – was proposing that, if the RAF should decide to transfer any more squadrons to the desert, it might consider an RCAF Squadron 'so that it may form a focal point for the many RCAF crews now serving in the Middle East.' There had been some talk of sending an RCAF Spitfire squadron to the desert in mid-1941, but nothing had come of it. Now, however, the Air Ministry was quick to accede to a request which fitted in so conveniently with its needs; and on 26 March 1942 C.G. Power told his Cabinet colleagues that the selected squadron would be No 417,⁴⁰ formed four months earlier at the

alluringly named Charmy Down, in Somersetshire, under the command of an RAF New Zealander. If the squadron was to become the 'focal point' that Edwards sought, however, it would need a Canadian commanding officer with substantial diplomatic and administrative skills. On 23 March, the same day the squadron was officially assigned to the Middle East theatre, Squadron Leader Paul Pitcher, was posted to command it.

There were many RAF men in the squadron's ranks, while many of those who were Canadian were not particularly well qualified. Pitcher made attempts over the weeks before embarkation to bring in seasoned RCAF tradesmen, but they were hard to find and even harder to pry loose from their current appointments, even though Overseas Headquarters was demanding the maximum possible level of Canadianization. By 13 April, when No 417 Squadron sailed for Egypt, the overall figure was 72 per cent, with all the pilots and 70 per cent of the non-flying staff in the squadron being Canadian.⁴¹

As we shall see in subsequent chapters, the squadron's operational experiences over the next three years were not much different from those of other Canadian fighter squadrons. Because of its prolonged isolation in the Mediterranean theatre, however, the application and maintenance of Canadianization policies took on peculiar overtones for No 417. Replacements, especially in the form of experienced pilots to serve as flight commanders and their deputies, were sometimes hard to acquire. Paradoxically, at other times the problem was reversed as staff officers had to deal with overqualified Canadians for whom there were no further promotion possibilities in-theatre, short of posting them to RAF squadrons or formations. An experienced flight commander with No 401, for example, might be promoted to command another RCAF fighter squadron in the United Kingdom easily enough, but his counterpart in No 417 had only one possibility open to him if he was to remain with an RCAF unit; he would have to wait for his own squadron commander either to be posted elsewhere or to become a casualty.

No 417 was still in England and still working up to operational standards when, in mid-February 1942, the Luftwaffe combined with the Kriegsmarine to effect the 'Channel dash' of the battlecruisers *Scharnhorst* and *Gneisenau* and the heavy cruiser *Prinz Eugen* from the Atlantic port of Brest into the North Sea. The RAF's failure to respond promptly and adequately, despite the existence of a detailed contingency plan for Operation Fuller, meant an opportunity wasted for Bentley Priory, which must bear a substantial part of the blame.

Some 280 aircraft, Me 109s, 110s, and FW 190s working in shifts, served as guardian angels for the German flotilla. Coastal Command and Fighter Command reconnaissance failures allowed the enemy to enter the Strait of Dover – halfway home – before the British were able to launch their first strike, undertaken by six obsolete torpedo-armed Fairey Swordfish biplanes of the Fleet Air Arm with five fighter squadrons detailed to protect them. The Hornchurch wing, consisting of Nos 64 and 411 squadrons, was to fly as close escort and try to suppress anti-aircraft fire, while the three-squadron Biggin Hill wing, which included No 401, was to act as top cover. Only one of these

five squadrons succeeded in rendezvousing with the Swordfish, however, and an excessive emphasis on security ensured that none of them really understood the importance of the task at hand and only a few even knew what the task was.⁴²

No 411 Squadron, led by Squadron Leader R.B. Newton, RAF (on his first day in command), was late getting into the air owing to 'difficult weather conditions.' Perhaps there seemed to be no great urgency, since the Canadians were only ordered to do an 'E-boat search.' Their subsequent patrol did not 'bring the Squadron into contact with the main enemy convoy,' although they 'received the attention of flak ships with no damage to ourselves.' A second mission, in mid-afternoon, found them covering the withdrawal of bombers which had vainly sought the enemy through heavy cloud cover.⁴³

No 401 Squadron also failed to make the rendezvous on time, delayed by a security muddle which would have been comic if it had not been for its tragic consequences. The battle plan for Fuller was locked in a safe at Biggin Hill, but the station intelligence officer had taken a day's leave, neglecting to leave the key in his deputy's charge. It was not until Group Headquarters impatiently queried the wing's failure to respond that the pilots were ordered to take off 'to intervene in a battle between German E-boats and British MTBs.' Low cloud and mist mixed with driving rain ensured they would not make visual contact with the Swordfish, while the fact that the Fleet Air Arm and Fighter Command used different radio frequencies prevented air-to-air communication. Leaving the Swordfish to their fate (they were all shot down by Flak and fighters and only five of eighteen crewmen survived), Nos 401 and 128 squadrons carried out a patrol north of Calais and 'numerous dogfights ensued when considerable numbers of Me 109Es and Fs and FW 190s were engaged in combat.'⁴⁴

No 403 Squadron, as part of the North Weald wing, was ordered 'to maintain air superiority between 1430 and 1500 hrs whilst the main attack by Coastal and Bomber aircraft was taking place.'⁴⁵ The wing took off at 1410 hours, expecting to link up with the Debden wing over Manston, but layered clouds apparently thwarted the process. Indeed, the Canadians now found themselves proceeding independently, in three sections of three machines each – shades of the now discredited vic! – led by their British commanding officer, Squadron Leader C.N.S. Campbell. Campbell became separated from the others off the French coast but, after jousting briefly with three Messerschmitts attacking two Hudson bombers, he was re-united with the two Spitfires of his own Red section and three from another squadron. '109s kept breaking cloud base but upon [the Spitfires] turning towards them, took cover.' Yellow and Blue sections, meanwhile, were claiming one enemy aircraft destroyed and another damaged in the tangle of small-scale engagements brought about by poor coordination of effort in cloud-riven skies.

Several other pilots had brief combats with Messerschmitts as they darted in and out of low clouds, but made no claims. By the end of the day Fighter Command had lost twelve pilots and seventeen machines while shooting down seventeen enemy fighters and accounting for eleven German airmen. But if the

tactical battle ended in a draw, there could be no doubt which side had won the strategic, operational, and public relations battles. The 'Channel block' had failed ignominiously.⁴⁶

With the Fuller fiasco behind them and the Wehrmacht turning to the offensive again in the east, the British chiefs of staff once more considered the question of how their various forces might best help the Soviet Union in 1942. The Royal Navy was doing all it could to ensure that North American supplies reached Murmansk; in North Africa, an out-generalled and ill-led Eighth Army, pursued by the Afrika Korps, was in retreat towards El Alamein and the Nile delta; Malta was fighting for its life and absorbing fighter resources; and Bomber Command was now endeavouring (with very limited success) to destroy Germany's industrial base and the morale of its people. The air staff's proposal for Fighter Command was an enhanced offensive, its intelligence branch estimating that 'a total of 200 [enemy] day fighter casualties per month from all causes on the Western Front would result in a [long-term] decline of the enemy's strength, and that a total of 250 would necessitate reinforcement in the West at the expense of the German single-engined fighter force in Russia.'⁴⁷

Of the 250 hoped-for casualties, half would have to be inflicted in combat, while the other half could be expected in the form of accidents incurred in the course of operations and training. Bringing the enemy to battle posed a most difficult problem, however – what would compel the Jagdflieger to come up and fight? With the new auxiliary fuel tanks just coming into use, the radius of effective fighter operations had risen to about 190 miles from No 11 Group airfields, and within that range priority was assigned to potential Circus targets based on their economic importance and the degree of damage which might be inflicted by quite small bomber forces. Power stations came first and six major factories second: there were fifty-eight targets altogether, forty-one in France, twelve in Belgium, and five in the Netherlands.⁴⁸ Whether any of these were of sufficient importance to lure the Luftwaffe into the air remained to be seen.

A comparison of opposing capabilities seemed to favour the Germans. 'This year we are worse off for formation leaders and experienced pilots than we were in 1941,' declared Bentley Priory analysts. They went on to speculate that 'owing to so many having been sent overseas ... it seems reasonable to suppose that Fighter Command has been more drained of experienced pilots than the opposing fighter forces on the Western Front' – a supposition that took little or no account of German wastage in the east. Additionally, 'we start this year's operations at a technical disadvantage greater than that prevailing at the end of last year. Fighter Command is still equipped with the Spitfire VB, while the enemy has the Me 109F and is getting FW 190s in increasing numbers.' Both the Me 109F and FW 190 could fly faster (by about twenty miles per hour) and higher (by more than 2000 feet) than the Spitfire VB. Moreover, RAF/RCAF sallies were as predictable as Luftwaffe reactions were not. 'The restricted area of enemy territory within the radius of action of our fighters limits the variations which can be made in the tactical conduct of our offensive

operations. Such operations are therefore bound to have a certain similarity, and it will be difficult to achieve surprise.⁴⁹

Nevertheless, staff officers calculated (wrongly, as we have seen) that since Fighter Command had inflicted 120 losses per month on Luftflotte 3 in 1941 while using twenty squadrons, 'if our effort this year were half as great again as it was last year, this would not only allow for the increased disadvantage under which our fighters would operate, but would give a margin to ensure that last year's enemy casualties were exceeded.' In other words, in order to achieve the required battle attrition of 125 enemy aircraft per month, Douglas would need an additional ten squadrons. That number would permit the offensive to proceed despite its own wastage, predicted (wrongly again – the RAF/RCAF would lose fewer aircraft and more pilots than expected) at 112 pilots and 330 aircraft monthly. Thus, 'the aim may be attained by continuous intensified CIRCUS and other offensive operations on the lines of those carried out last year. An average of six bomber sorties a day, with a maximum of 30/36 sorties on any given day, should be allocated to CIRCUS operations.'⁵⁰

The Germans were not expected to open a major campaign in Russia before the conclusion of the spring thaw and No 11 Group was to be reinforced by the required ten squadrons before then. Current operations would continue on a modest scale until the enemy had resumed ground offensives in the east, at which time they would be expanded by half. 'You are terribly short of fighter aircraft,' noted the prime minister, early in March, 'but it pays to lose plane for plane. If you consider CIRCUS losses will come within that statement, it w[oul]d be worthwhile. But beware of the future.' In the event, the pace quickened earlier than expected, with an average of 826 sorties a day between 13 and 17 April 1942 and over a thousand on the 16th. (Coincidentally, a month later Bomber Command would launch its first thousand-bomber raid.) The Germans responded selectively, as they had in 1941, intervening only when they felt circumstances favoured them. Fighter Command lost thirty-four aircraft in March and ninety-three in April, while claiming a total of 114 enemy machines destroyed. In fact, between the beginning of March and the end of June the Luftwaffe lost only fifty-eight machines in combat, while Bentley Priory, claiming 197 victories, lost 259. As for the five RCAF squadrons, they lost twenty pilots while claiming to have shot down nine enemy machines.⁵¹

Once again it is impossible to determine the number of enemy aircraft they actually destroyed, but this time the Canadian proportion was probably close to the overall Fighter Command ratio of over four lost for every one actually shot down. Nevertheless, since no one at Bentley Priory – or, indeed, in the Air Ministry or the War Cabinet – knew at the time how bad that ratio was, morale did not suffer unduly. Individual pilots who lost friends and colleagues were usually consoled by the belief that their squadron or wing was giving as good as it got.

That was not the case on 2 June 1942, however, as No 403 Squadron lost six pilots in the course of a single disastrous sweep. At the time the squadron was under the command of a New Zealander, Alan Deere, DFC and Bar, the

unit's sixth non-Canadian commanding officer in the thirteen months since its formation. Early that morning the squadron flew a sweep along the French coast notable only for the complete absence of either Flak or enemy aircraft. Back for breakfast at North Weald by 0730 hours, the pilots then prepared, together with the Hornchurch wing, to trail their coats in the vicinity of St Omer where the Luftwaffe maintained a major fighter base. The Canadians were assigned to serve as top cover, above and behind the two Hornchurch squadrons, at 27,000 feet.

A ground controller in England, relying on radar, informed them as they crossed the French coast that Germans were already in the air, but No 403 saw none of them on its outward leg. When the first enemy machines appeared, they were closing on the Canadians from the rear; then more were seen, above and to the left, and yet more on the right. The Luftwaffe had waited until the wing was most vulnerable – on its way home, with fuel supplies dwindling, having lost several thousand feet of valuable height. Deere, highly experienced pilot that he was, found himself 'engulfed in enemy fighters – above, below, and on both sides, they crowded in on my section.'

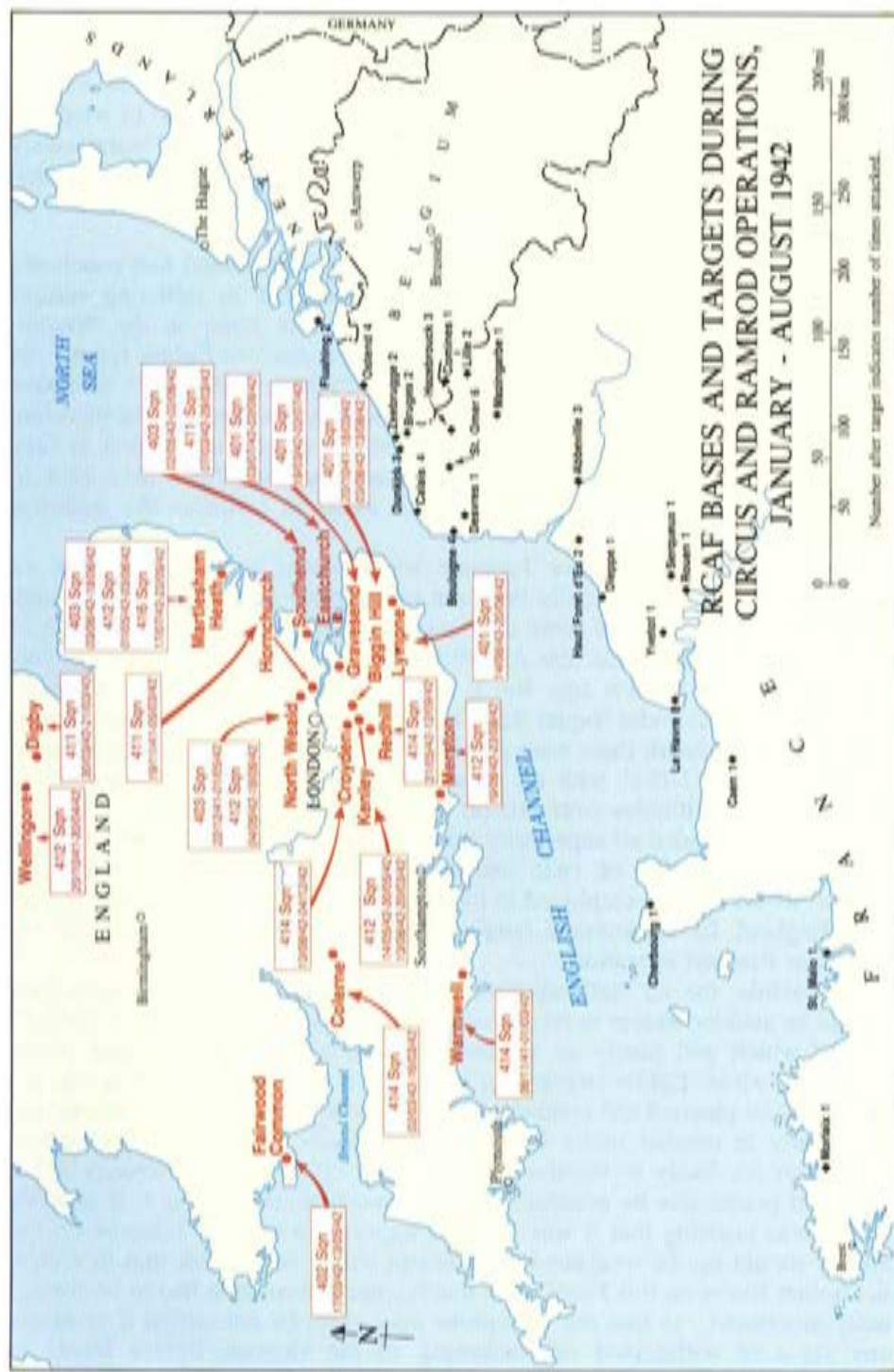
Ahead and above I caught a glimpse of a FW 190 as it poured cannon shells into the belly of an unsuspecting Spitfire. For a brief second the Spitfire seemed to stop in mid-air, and the next instant it folded inwards and broke in two, the two pieces plummeting earthwards; a terrifying demonstration of the punch of the FW 190's four cannons and two machine-guns ...

There was no lack of targets, but precious few Spitfires to take them on. I could see my number two, Sergeant [H.] Murphy, still hanging grimly to my tail but it was impossible to tell how many Spitfires were in the area, or how many had survived the unexpected onslaught which had developed from both sides as the squadron turned to meet the threat from the rear. Break followed attack, attack followed break, and all the time the determined Murphy clung to my tail until, finally, when I was just about short of ammunition and pumping what was left at a FW 190, I heard him call.

'Break right, Red One; I'll get him.'

As I broke, I saw Murphy pull up after a FW 190 as it veered away from me, thwarted in its attack by his prompt action. My ammunition expended, I sought a means of retreat from a sky still generously sprinkled with hostile enemy fighters, but no Spitfires that I could see. In a series of turns and dives I made my way out until I was clear of the coast, and diving full throttle I headed for home.⁵²

Murphy also got back to North Weald, but six of the Canadians did not, one being killed and five spending the rest of the war in prison camps. Moreover, three of the aircraft that returned had to be written off. The squadron engineering officer obtained nine replacements that same afternoon, and groundcrews working through the night had thirteen machines serviceable by next morning. All their efforts went for naught, however, for no sooner were they ready than the squadron was declared non-operational and sent first to Martlesham Heath, a quiet backwater in No 12 Group, and then on to Catterick in Yorkshire, to recoup. Deere protested personally to his group commander, Air Vice-Marshal



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Trafford Leigh-Mallory, insisting that squadron morale had not been affected by its misfortune and that his pilots wanted to remain active. Leigh-Mallory (a notably pessimistic and unsympathetic character) was not to be moved, alleging that, somehow, Deere had not been 'entirely blameless' in what had happened because he was 'rather too fond of a fight' and took 'unnecessary risks.'⁵³ Even today, it seems a peculiar charge. It was not Deere's policy that had led to the wing sweeping over France, and he had hardly chosen to be ambushed.

By mid-June the assistant chief of the air staff (operations) had concluded that while 'day offensive operations have succeeded in inflicting serious losses and in holding a considerable enemy fighter force on the Western Front which has absorbed the output of his most modern fighter types,' the FW 190 was so technologically superior that Fighter Command's offensive must be modified. The Mark V Spitfire was simply inadequate, and therefore 'Typhoons should be employed in day offensive operations as soon as they are available in sufficient numbers and trained operationally, with a view to determining the extent to which they will assist in restoring the technical balance.'⁵⁴

Unfortunately, the Hawker Typhoon would never be effective in an air superiority role. It had initially been put into service in September 1941 and, with a maximum speed of more than 400 miles per hour and an armament of twelve .303 machine-guns, the Air Ministry had expected it to match or surpass the Me 109 and FW 190. But it quickly proved a great disappointment. The original 24-cylinder Napier Sabre engine was unreliable and major modifications were required; there were problems with the tail structure; and its great weight left the 'Tiffie' with an inferior rate of climb and a disappointing performance at altitudes over 20,000 feet, a handicap that made it virtually useless in its intended air superiority role. The engine reliability problem would be solved by the fall of 1942 and a variant mounting four 20-millimetre cannon would then be employed in intercepting low-level 'hit and run' raiders over England. Its weakness at height, however, made it quite unsuitable for Circus or Ramrod operations.

Meanwhile, the air staff advised, 'deep penetration in CIRCUS operations should be avoided except in respect of bombing targets, the damage or destruction of which will justify an adverse casualty balance in the fighter forces involved,' while 'fighter sweeps designed to bring the enemy fighters into the air should be planned and conducted with restraint, and should aim at meeting the enemy in combat under favourable conditions.' Indeed, 'if the tactical conditions are likely to become adverse in any particular operation, combat should if practicable be avoided.' At the same time, the AOC-in-C at Bentley Priory was insisting that it was 'of vital importance that our pressure on the enemy should not be weakened to an extent which will enable him to reduce his fighter forces on this Front'; and intelligence information had to be continually monitored, 'so that our operations may again be intensified if there are any signs of withdrawal or weakening of the German fighter forces in France.'⁵⁵

At the Air Ministry, the director of intelligence was vaguely optimistic in early July, estimating that German fighter reserves were down to about two hundred first-line aircraft, half of them less than fully effective. 'There is no doubt that Fighter Command's offensive during the past few months has contributed substantially to the present satisfactory situation, and further intensive operations would be likely to cause the Germans most serious embarrassment.' Such optimism in the Air Ministry was harshly contradicted by operational reality. The intelligence assessment was based on an Enigma decrypt which revealed that the Luftwaffe had imposed flying restrictions on its formations in Russia and was experiencing difficulties in supplying aircraft to North Africa, problems that were more a matter of operational logistics than German manufacturing capacity at this stage of the war. Meanwhile, attrition continued. In June Fighter Command lost fifty-nine aircraft against thirty-two enemy claimed and twelve actually destroyed; in July the figures were sixty-two admitted losses against twenty-nine claimed and sixteen actually shot down. When the AOC-in-C passed his operational summary on to Leigh-Mallory at No 11 Group, he tried to make the best of a bad job, remarking, 'It does show that our fighter offensive is having an appreciable effect and that the losses we have sustained have not been fruitless.'³⁶

If the day-fighter war was not going exactly as Bentley Priory might have hoped, after dark the clash between the RAF/RCAF and the Luftwaffe brought forth a whole different category of challenges. Having learned in the Battle of Britain that daylight attacks were more dangerous to the attacker than to the target, German bombers now flew mostly at night. That strategy had initiated a war of electronic measures and counter-measures relying, in the British camp, on newly evolved and developing technology and an enormous degree of concentration, patience, and stamina in radar operators and pilots. The problem was that of placing night-fighters in the right place at the right time, for while the original technology of the early radar stations could provide information about direction and numbers of hostile aircraft it could not quite pinpoint their location. By day, that hardly mattered; it was enough for the ground controllers to place their pilots within two or three miles of the enemy in order to ensure visual contact. But at night, when visibility was only a few hundred yards at most, more precision was needed.

From 1938 work had been progressing in the electronic realm of airborne interception (AI) radar, incorporating a detection device small enough to be installed in a night-fighter and sufficiently unerring to lead the pilot into visual range of his target at night. The need for an AI operator, however, as well as a pilot, brought up the question of a suitable airframe. It was not so much a matter of picking the best aircraft but of determining which of those available was the least ill-suited to the role, and experimental sets were fitted initially in Fairey Battles, then in Blenheims and Defiants. All were disappointing, with neither the AI set nor the aircraft performing to the required standard. There would not be a confirmed AI destruction of an enemy machine until the night of 22 July 1940, eight months after the first installations.

A year later three technical innovations, working in combination, dramatically improved the performance of night-fighters. The first was better control, which came in late 1940 in the form of ground control interception (GCI) radar, whereby a controller on the ground could vector the night-fighter into the general vicinity of a bomber. Fighter Command figures on night interceptions indicate that, in November 1940, AI-equipped fighters flying without GCI control flew nearly ten sorties for each contact made, while, in May 1941, AI interceptors supported by GCI required only three sorties for each contact. Then came the twin-engined Bristol Beaufighter, which was more than 40 miles per hour faster than the contemporary Junkers Ju 88, while its armament of four 20 millimetre nose-mounted cannon and six .303-inch machine guns lodged in the wing-roots gave it impressive firepower. Finally, the introduction of AI Mark IV, able to maintain contact until the target was less than two hundred yards away, though still not guaranteeing a visual sighting, improved the odds tremendously.⁵⁷

When three RCAF night-fighter squadrons, Nos 406, 409, and 410, were formed in the spring and summer of 1941, the first two had the good fortune to be equipped with Beaufighters almost immediately, but No 410 was condemned to languish on Defiants until the following summer and would not be completely re-equipped with Beaufighters until January 1943. Initially, No 406 – based at Acklington, in Northumberland – was favoured with a number of pilots who had received some night-flying training on their Hurricanes posted in from 401 Squadron; five months later, however, only 29 per cent of the aircrew and 8 per cent of the groundcrew were Canadians. The percentage of RCAF groundcrew would climb steadily until July 1943, when all three squadrons could report a level of 90 per cent, but acquiring Canadian AI operators was a struggle. As there were no facilities for training them in the BCATP schools 'because the radar air interception (AI) equipment was on the secret list and available only in Britain,' most of the operators had to come from the RAF. Thus, through the greater part of the war, many of the aircraft in Nos 406, 409, and 410 squadrons were flown by RCAF pilots, while the AI equipment was operated by RAF radio/navigators, and none of the three squadrons achieved even 90 per cent Canadianization among aircrew until late in 1944.⁵⁸

The first Canadian success came on 1 September 1941 when, on a moonlit night, Flying Officer R.C. Fumerton and Sergeant L.P. Bing (one of the rare RCAF radio/navigators) of 406 Squadron shot down a Ju 88 over northeastern England. It was the first of many claims for Fumerton, who was to become one of the RCAF's most successful night-fighter pilots and, in August 1943, the squadron's first Canadian commanding officer. The engagement was also fairly typical of the slow, deliberate procedure involved in aerial interception at night – a process that contrasted dramatically with the lightning-quick, almost reflexive, nature of day-fighting. The Canadians were initially vectored towards the raider by a ground controller until, at a range of about a mile, the unfortunate bomber appeared as a blip on Bing's radar screen. Closing the range, Fumerton visually identified the Ju 88 as it passed in front of him, slightly above and travelling from right to left. He briefly lost sight of it in a cloudbank, but

following Bing's instructions he regained visual contact in clear air and pulled into a position behind and below the Junkers. When he opened fire at pointblank range, the bomber's starboard engine immediately caught fire. Fumerton gave it one more burst and his target 'fell in flaming pieces.'⁵⁹

No 406, perfectly situated at Acklington to intercept raids on the industrial northeast of England, claimed four more victories before Christmas (two in one night during a German attack on Tynemouth). No 409 Squadron was stationed at Digby, in Lincolnshire, and No 410 was split between Ouston, north of Durham, and Dyce, northeast of Aberdeen, all three bases well away from the Luftwaffe's favourite targets. Inevitably, they saw less action. No 409 shot down one bomber on the night of 1/2 November, but No 410, flying its Defiants without AI radar and even further away from the action, made no contact with the enemy at all.⁶⁰

'Blind,' undergunned German bombers posed little threat, but operating high-performance aircraft in darkness, often during poor weather and before the development of blind landing systems, was dangerous enough. Before the turn of the year the three squadrons had suffered a total of eight aircrew killed in various mishaps, including Wing Commander N.B. Petersen, who had taken command of 409 Squadron on its formation in June. He was succeeded by Wing Commander P.Y. Davoud, transferred from No 410 Squadron the day after Peterson's death. Davoud was an RMC graduate who had held a short service commission in the RAF from 1933 to 1935 and had then taken a civilian job as a bush pilot for three years before becoming head of the Hudson's Bay Company air transport division until the outbreak of war. Not even his wide experience and considerable leadership talents could prevent the accidental loss of six more aircrew over the next half year.⁶¹

In March 1942 Bomber Command attacked the German city of Lübeck, a Hanseatic port of more historic than military significance, chosen primarily because it was easy to find and was expected to burn well. In response, Hitler ordered a series of retaliatory raids on equally inappropriate British targets that were slyly dubbed (by British propagandists) 'Baedeker raids,' a reference to the classic prewar tour guides which emphasized their historic significance. The first was launched against Exeter in southwest England, on the overcast night of 23/24 April. The heaviest attacks, killing more than four hundred people, were against Bath on 25/26 and 26/27 April, and on the next night the enemy switched his attention to eastern England, dispatching forty-five bombers against Norwich. On the night of 28/29 April, when York was the target, some of No 406 Squadron's Beaufighters were in a position to strike; the squadron was now based at Ayr, in Scotland, but a detached flight operating from Scorton, some thirty miles northwest of York, was credited with a Dornier 217 that crashed near Malton. Two nights later, during a scattered German attack of some twenty-five aircraft upon the Tyneside area, the Canadians claimed one Ju 88 destroyed and several more damaged.⁶²

The last effective attack of the campaign was again against Exeter on 3/4 May and the RCAF units, flying from stations remote from routes to and from that city, played no part. Altogether, the enemy flew 716 sorties in the course

of the Baedeker raids, and the British claimed forty-five aircraft destroyed or probably destroyed, while German records list thirty-four bombers missing, with another four lost in flying accidents, or a loss rate of 5.4 per cent of the attacking force – for the Luftwaffe, a costly piece of retaliation, for the night-fighter force of Fighter Command a vast improvement over its performance of the previous winter.⁶³ There would be long periods of the war when Bomber Command loss rates would hover around 5 per cent, but while British production (of aircrew and aircraft) could deal with such depletion, German production, given the demands of the Eastern Front, could not.

By early 1942, with fighting taking place in Europe, Africa, and Asia, the Canadian government had recognized the consequences of its participation in a global conflict, and two more divisions, the 3rd and 4th, were preparing to go overseas while the creation of the 5th – like the 4th, ultimately to be an armoured formation – had been authorized. All that raised questions of air support. Doctrine, it will be remembered, had called for one army cooperation squadron to work with each infantry corps and every armoured division; and in the spring of 1940 there had been a second RCAF army cooperation squadron in England which might well have been assigned to that role. But in December of that year No 112 (AC) Squadron had been redesignated No 2 Squadron, re-equipped with Hawker Hurricanes, and turned into a fighter unit (it became No 402 in March 1941). Looking ahead, in May 1941 General McNaughton had called for another army cooperation squadron to be formed so that armour and air 'could grow up side by side.'⁶⁴ No 414 Squadron was established at Croydon, south of London, on 13 August, to await the arrival of the 5th Canadian Armoured Division at the end of the year.

Since they were still flying Lysanders, it was perhaps fortunate for both Nos 400 and 414 squadrons that McNaughton's forces were retained in the United Kingdom for the time being and not sent to some more active theatre of war. Over the summer of 1941, however, both re-equipped with the Curtiss Tomahawk. Although the four-gun Tomahawk was certainly no Spitfire – 'the P-40 design was obsolete by European standards before the prototype ever flew'⁶⁵ – it was a fighter, with a maximum speed of 350 miles per hour compared with the Lysander's meagre 230. The Lysander had been crewed by a pilot and air-gunner, but the latter was now superfluous since the Tomahawk was a single-seater, and at least one of them was known to complain.

I wish Headquarters in London would make up their minds [as] to what they are going to do with us. Most of us wish that they [would] send us back to Canada as instructors. I think for sure that every one of the Air Gunners is fed up with this country ...

Here is my routine for the past week here. Up at 7 and go to breakfast because we have eggs ... on parade at 8.15 which lasts till 8.30 then to the Gunner's rooms till 9, then back to the Sergeant's Mess and play pool till dinner time, then after dinner I usually go to bed until 3, or go and play a couple of sets of tennis.⁶⁶

In a military environment idleness quickly leads to discontent. Even the groundcrews, whose duties were essentially the same whether the squadrons were engaged in training or operations, found that a service life focused entirely around maintenance and training soon became excessively tedious, inevitably with an adverse effect on morale. Field exercises, carried out in conjunction with both British and Canadian ground formations, did little to lift dejected spirits, and it would be November 1941 before any aircraft were authorized to fly over enemy territory. Understandably, things were worst in the unit which had been committed longest. 'Morale and *esprit de corps* among the personnel of No 400 Squadron RCAF is at a very low point,' the personnel officer at Overseas Headquarters informed Air Commodore Stevenson in July 1941. 'Conditions existing in that Unit at the present time are such that, unless immediate corrective action is taken, there is liable to be a serious internal "split-up."' Squadron and station medical officers were concerned about the 'ill-feeling and unrest' prevailing, he added. 'Several of the junior officers who are full of initiative and ambition have, in an informal way, asked to be posted to a more active branch of the Service and this, I am sure, is not due to a lack of moral fibre but an honest desire to do a worthwhile job of work in the war effort.'⁶⁷

So delicate was the situation that the censors singled out No 400 Squadron for special attention in a report which described morale as 'undoubtedly low,' and they added that the outlook at Odiham was 'one of unruly discontent.' But, while they argued that living conditions were at the root of the problem and explained how 'boredom and inactivity greatly aggravate the situation,' it may well have been the other way around. One writer lamented that 'here we are 21 months over here and no scrap yet. It sure gets you down. Having to waste our time here when we could sit down back home and do the same. Russia is doing the work and all we have been doing [are the] preliminaries and taking the bows. It can't last forever and soon we will be caught short and [have] nowhere to turn ... Has it got me down. I'll say so. I'm bored stiff. The longer I stay here, the more I hate this place.'⁶⁸

Pilots relieved their feelings to some extent by taking deliberate – and illegal – risks, some of them quite spectacular.

Three of our fellows were playing around one day, when one of them takes a notion to fly under a bridge. He came out Okay. Bridges aren't what they are at home ... I imagine they couldn't have had more than 10 ft. clearing [sic]. The second guy thought that was nothing, so he looped around it, under, then over, then under again. He came out Okay. The third guy thinks that's nothing. He shows them both up by doing a slow roll under the bridge – only he didn't quite make it. He lost about 3½ ft of his port wing ... He crippled [sic] back to the field though, and found out that his flaps weren't working ... He done the cutest summersault you ever heard of ... We had another chap clip the bottom off his wing on a German gun post one day, scraping all the paint off and putting a couple of guns out of action. He wasn't supposed to be over there. Another guy was flying a Lizzie [Lysander] along one day when he decided to see

who was in the train down below. He flew alongside it for a while, looking in at the window, and slapped down a signal post with his wing ... Another guy took down a hotel sign with the bomb ring on a Lizzie and came back with it dragging behind him.⁶⁹

The bridge referred to was one over the Winchester bypass; the aircraft in question were Tomahawks; and the feat is well authenticated.

The squadron's rank and file lacked such outlets for their frustrations and perhaps that magnified their day-to-day problems. In the fall of 1941 Army Co-operation Command decided that all airmen at Odiham, British and Canadian, should be fed through a single kitchen and mess hall, and the specifically Canadian facilities of No 400 Squadron were closed down. Not surprisingly, the men took great exception to the new system.

We now eat with the RAF. The technical name for the unseasoned pig swill we're fed is 'plain wholesome food.' The lunches are edible but uninteresting. The other three meals aren't big enough to keep a canary in good voice. And the mess stinks to high heaven, a greasy lavatory smell that is enough to kill the finest appetite, mother. You may think I'm joking, still, this is the plain, simple truth – *we're hungry all the time*. I'm speaking for myself and Rusty and every other Canadian on this accursed station.⁷⁰

If the writer was not, in fact, speaking for all his comrades, he certainly represented a large sample judging by the number of basically similar complaints cited by the censors. A Canadian soldier, however, an anti-aircraft gunner, saw Odiham from a very different perspective.

My detachment is finally attached to the 400th Air Squadron. The airmen here are very good to us but are a spoiled and pampered lot. That's all I can say for them. They should be sent to the Army for a few months or a year and they might realize how comfortably off they are now. They have warm rooms, fireplaces in each room, linoleum on the floor, beds and mattresses, canteens and about five meals a day, yet they think the world is against them and [that they] are badly abused.⁷¹

Sinking morale at squadron and station was aggravated by more 'ill-feeling and unrest' generated at higher levels by the on-going doctrinal disputes and bureaucratic squabbles between army and air force over the army cooperation function. Colonel Charles Carrington, the British Army's liaison officer at Bomber Command, found that, even in April 1942, 'there has been a change for the worse in the past year ... the prospect is terrifying.' A month later Air Vice-Marshal Edwards apparently intervened to put forward a Canadian view. He sent the Air Ministry's director of military co-operation a paper condemning the current RAF approach to integrated air/ground operations. Unfortunately the paper itself is not on file, but there is what appears to be an earlier draft of it in General McNaughton's papers, which suggests that he approved of it and that the critique may even have originated with him. The argument was brutally frank, claiming that cooperation between the army and air force 'still

hardly exists' because of the 'strong bias of senior Air Force officers' in favour of strategic bombing.⁷²

On 11 June Sir Henry Pownall, vice-chief of the imperial general staff, noted in his diary that 'we have launched our paper on air support for the Army, saying that we need 109 squadrons, roughly half of the fighter-reconnaissance and half of bomber-reconnaissance types ... Our difficulties are going to be great, in that provision for our air needs is bound to cut across and interfere with production of heavy bombers and fighters for the RAF, and of course the Air Ministry is going to sing that tune loudly. Army Co-operation has been the Cinderella branch of the RAF, and the Army's efforts to get proper air support in reconnaissance, bombing and fighter cover has never had a fair deal ...'⁷³ In the event, it would take a combination of hard-won North African battle experience in the form of 'lessons learned,' bitter in-fighting on an interservice bureaucratic level, and the unbridled ambition of Air Marshal Sir Trafford Leigh-Mallory, who was promoted to the post of AOC-in-C Fighter Command at the end of 1942 and 'who saw in Army/Air Co-operation a new field for the Fighters to conquer,'⁷⁴ to bring about the demise of Army Co-operation Command and the formation of a Second Tactical Air Force in June 1943.

Meanwhile, when McNaughton (under whose operational authority No 400 Squadron still came) authorized the squadron's first Rhubarbs, or freelance offensive sorties over enemy territory, the opportunity was welcomed. Several such missions were flown in November and December 1941 when weather conditions favoured the Tomahawks by providing adequate cloud cover. They encountered no opposition until 13 December, when two of them were trapped by half a dozen German fighters and both were lost in the Channel. Those were the squadron's only operational losses in six months, in part, perhaps, because the Tomahawks required intensive maintenance and the daily availability varied between nil and six. Moreover, Populars (photo-reconnaissance missions, another army cooperation responsibility) were only flown when the weather was just right, so that by May 1942 'both for training and operations they [Canadians of 400 Squadron] have been practically impotent for months.' Nevertheless, Stevenson told the AOC-in-C Army Co-operation Command 'that since these operations have commenced there has been a tremendous improvement in the outlook of 400 Squadron and I think that the initiation of these offensive sorties will have done much to relieve the tedium for Army Co-operation Squadrons.'⁷⁵

First Canadian Army had come into existence on Easter Monday 1942. Its commander, who appreciated the potential of tactical airpower, at least on a theoretical level, better than most general officers, visualized an RCAF army cooperation wing of six squadrons to go with it, or double what the air staff now thought appropriate. The CAS, Sir Charles Portal, explained that one limiting factor was the provision of a suitable airfield, but McNaughton had

* Was this 'vision' affected by his experience as air commander for the Dieppe raid and the critical analyses that followed it? See chapter 7.

a ready solution to that difficulty – his army engineers would build one! Work on Dunsfold, in Surrey and in the heart of the Canadian Army's overseas garrisons, began on 4 May. It usually took the British, even in the urgency of war, about a year to build an airfield similar to that planned for Dunsfold and to make it operational. McNaughton's sappers and airmen did it in six months.⁷⁶

In both Canadian squadrons the Tomahawks were replaced by North American Mustangs in June 1942, at least in part because of McNaughton's badgering of the Air Ministry and War Office. The Mustangs, early models powered by Allison engines and armed with .30 and .50 calibre machine-guns, were not as potent as the later, Merlin-engined versions, but they could outrun FW 190s and the Me 109F at low level and were able to evade the enemy on occasion, or even fight him when they must, with some faint prospect of success.⁷⁷ With these relatively high-performance aircraft it was practicable to insert both squadrons gradually into the overall fighter war, a process made easier – and, to some extent, inevitable – by the need for flights over France and Belgium to be directed by Fighter Command's sector control systems. For the moment, technology, more than doctrine, was bringing Fighter Command and Army Cooperation Command closer together.

Bentley Priory faced the inevitable with a stiff upper lip. 'As time goes on in this war we have been finding that fighter aircraft have been subjected to all sorts of queer roles,' announced a memorandum of March 1943. 'The old idea of the fighter being the destroyer of enemy bombers alone has changed, and we now find that we have to cope with anything from the heavily defended bomber down to the lightly motorized [army] column.'⁷⁸ But although acquiring the capability to engage the enemy on more or less equal terms did great things for the morale of army cooperation squadrons, the assignment of fighter units to a fighter-bomber role struck a heavy blow to the self-esteem of those pilots first assigned to such duties. No 402 Squadron, for example, a recent foster-child of the fighter clique, had been horrified by a decision in the fall of 1941 to re-equip it with Hurribombers – Hurricane IIs equipped to carry 250 lb bombs. The argument put forward to meet their plaintive yelps by Air Commodore L.N. Hollinghurst, director-general of organization in the Air Ministry, was less than honest. 'Far from being armed with an obsolescent type of aircraft, they [402 Squadron] are armed with one of the newest types, and employed on a novel, and, at the present time, vitally important tactical task; that of sinking enemy small ships with bombs carried in fighters, and also attacking small, vital ground objectives from a low height in enemy occupied territory.'⁷⁹ The task may have been novel, but the Hurricane IIB could not be fairly described as 'one of the newest types,' and No 402's most notable attempt at 'sinking enemy small ships' was far less successful than they believed at the time.

A reconnaissance report had alerted them to the presence of four German minesweepers operating off the Ile de Batz, near Brest, on 16 February 1942. Squadron Leader R.E.E. Morrow (who had joined the unit as a pilot officer when it was still No 112 Squadron) led six Hurribombers from Perranporth,

in Cornwall. They flew at sea level until, forty minutes out, they climbed to 2000 feet and spotted five enemy 'destroyers,' steaming in line, directly ahead. The Canadians broke into three pairs and attacked. 'Diving from 2000 feet in a beam attack firing a 14 second burst with his machine guns and releasing his bombs at a height of 100 feet, Red 1 observed strikes from his machine guns on the superstructure; Red 2, P/O Ford followed his leader in his dive and released his bombs at a height of 800 to 500 feet on the same target. Red 2 also attacked with his machine guns, giving a 10 second burst.'⁸⁰ Flak 'was very intense ... the heaviest and most intense AA barrage [the pilots] have ever seen.' The pilots of escorting Spitfires reported direct bomb hits on two vessels, as well as machine-gun strikes, and the Canadians claimed to have sunk one destroyer and damaged a second. German records, however, only list two minesweepers suffering 'light damage, and ... a few casualties.'⁸¹

Even the success which they thought they had achieved did nothing to reconcile the pilots to this new role. Morrow reported that 'considerable dissatisfaction is felt by the pilots of this Squadron with their present equipment,' and Air Vice-Marshal Edwards took up the cudgels again, this time with the Air Ministry. Within weeks of its attack on the minesweepers, No 402 took delivery of Spitfire VBs and the commanding officer was writing to Edwards 'to extend to you the most sincere thanks of myself and the other Officers and Pilots of 402 Squadron for the efforts you have made on our behalf in the matter of Squadron equipment.'⁸² The squadron was back to what all true fighter pilots considered their only proper function – shooting at other pilots – only in time to discover that more and more of Fighter Command's resources were being diverted towards the ground war.

In March 1942 Air Marshal Sir Arthur Barratt, the AOC-in-C Army Co-operation Command, testily remarked that while, finally, he had a system in place to coordinate Bomber Command's No 2 Group aircraft with his own, Bentley Priory's burgeoning interest in attacking ground targets had inserted a new factor. 'The picture becomes a little complicated,' Barratt noted, because Fighter Command 'are all out to play in this business, as are their Group Commanders, and I rather fear that there is a danger of a series of different regional arrangements being made by each Army Commander with his adjacent Group.' A few months later the Army's liaison officer at Bentley Priory had also commented on the crossing of functional lines. 'Two Commands are at present studying Army Air Support – Fighter Command and Army Co-operation Command. Both are carrying out research almost independently with resultant waste of effort and confusion.'⁸³

Sir Sholto Douglas had informed his groups in January 1942 that in future they would be playing a more active role in army support. If effective cooperation was to be established, he instructed, 'it is essential that a much closer liaison should be established between the two services than generally exists at present. In bringing about this liaison it should be borne in mind that although 15 Squadrons have been earmarked for Army support duties, such duties are not outside the scope of any Fighter Squadron and training should therefore not be confined to these Squadrons, but should be extended as far as possible to

all Day Fighter Squadrons in the Commands.⁸⁴ He went on to suggest a number of minimum steps that groups might take. They should liaise directly with the army and corps headquarters in their areas, while group and sector controllers should familiarize themselves with the signals systems which had been developed for providing close support. Local joint exercises should be organized, officer exchanges should be arranged, and 'fighter pilots should practise map reading and memorizing.'⁸⁵

Meanwhile, the Army Co-operation School at Old Sarum conducted courses for air and ground formation commanders and senior and junior staff officers without reference to Fighter Command's army support training. The school arranged joint exercises and, in April 1942, GHQ Home Forces issued general instructions for their conduct, the principal objects being: 'To train Army and RAF formations to work together in battle with the fullest knowledge of each other's possibilities, limitations and procedures ... To train RAF squadrons in the problems of rapid briefing, navigation, recognition and tactics peculiar to Army Air Support,' and, 'to train army units in the rapid and effective defence against enemy air attack.'⁸⁶ Field manoeuvres were complemented by command, staff, and signals exercises to develop joint procedures and coordinate the delivery of their firepower to the right target at the right time.

One of the more important exercises was Dryshod, held just two weeks before the disastrous Dieppe landings in August 1942, during which each of the exercise armies deployed an air staff working with an Air Support Signals Unit, or ASSU, which communicated front-line requests to supporting air formations. Commanders and staffs learned much about wireless and equipment faults, target indication and recognition, the need to place air liaison officers (who were, in fact, soldiers) with squadrons, ways to improve both preliminary ground and air briefings, passing information, and establishing clear lines of responsibility between the services. Exercises necessarily lack the harsh reality of actual operations but they are the means of developing and learning principles and procedures on which operations can subsequently be based. Of the value of Dryshod in identifying the fundamentals of joint army-air force action, for example, Colonel Carrington has remarked that 'there was everything to be learned from the lessons of Dryshod, nothing to be learned from Dieppe, except how not to do it, a little late in the War to learn that lesson.'⁸⁷

The Turn of the Tide, 1942-3

'The weight of the war is very heavy now,' reflected Winston Churchill on 7 March 1942, 'and I must expect it to get steadily worse for some time to come.'¹ The turn of the year would see the turn of the tide, but the spring, summer, and early fall of 1942 were not happy times for the Allies. Much of the Far East had been lost to the Japanese, and by mid-summer the Germans were in Egypt, two misfortunes which exposed the beleaguered – and once more, retreating – Russians to new potential threats. At the end of June the Germans launched a new offensive in the Caucasus that raised the possibility (which the Allies had to consider, though the Germans were not thinking along such lines) of a gigantic pincer movement, starting from Ukraine on one side and North Africa on the other, and meeting somewhere in Syria, Iran, or Iraq.

The situation at sea was, if possible, even more worrisome, for during the previous six months more than four million tons of Allied shipping had been lost to enemy action. In the air, on 31 May, Bomber Command managed the world's first thousand-bomber raid and the scale of its air offensive was growing month by month; but in a broad strategic context the activities of the Western Allies were still doing little to distract the Wehrmacht from its major campaigns against the Soviet Union. Understandably, then, throughout the spring and early summer Josef Stalin was harshly demanding a 'Second Front Now' to take some of the weight off his hard-pressed armies.

The Americans toyed with the idea of invading the Brittany peninsula (though only if the Russians appeared to be in imminent danger of collapse), but the British chiefs of staff were determined to reject Operation Sledgehammer out of hand. Each of them had his own good reasons for disapproval, but those of the CAS, Sir Charles Portal, centred on the question of fighter support, which he saw as an essential element in establishing a major bridgehead on the Continent. 'We could not afford more casualties than might result from one or two months' fighting,' he told his peers. Among many Western leaders, however, and not least among the chiefs of staff, there was a not-quite-muted suspicion, which Stalin was doing nothing to nullify, that if the Allies did not put in a major effort soon he just might sign a separate peace with Hitler.² For the British, the *pis aller* was a major seaborne raid on

a scale they hoped would lead Hitler to reinforce his defences in the west at the expense of his armies and air fleets in the east.

The vicissitudes of planning and mounting the disastrous Dieppe raid of 19 August 1942 – Operation Jubilee – are recounted in C.P. Stacey's official history, *Six Years Of War*, and in Brian Villa's revisionist work, *Unauthorized Action: Mountbatten and the Dieppe Raid*.³ An initial plan, differing in its tactical details – Operation Rutter – was cancelled at the last moment because of bad weather. Final plans required that the 6000-odd Anglo-Canadian troops involved in the operation set sail from five different Channel ports, shuffle themselves into battle order in the course of a night-time crossing averaging one hundred miles, and then make five closely coordinated landings along an eleven-mile stretch of rockbound coast. The objective selected (which had, of necessity, to be one within range of fighter cover projected from England) would test the prospects of capturing a small port without irrevocably damaging it. It was an overly complex and inflexible plan in which delay or failure at any point must endanger the whole operation; nor did it commit sufficient firepower, by air, land, or sea, to offer a reasonable prospect of success.

In the course of those inconclusive battles of attrition that had frustrated his squadrons while 'leaning forward into France' over the past eighteen months, Sir Sholto Douglas, the AOC-in-C of Fighter Command, had now succeeded in establishing a vague and uncertain air superiority over all the airspace within reach of Fighter Command. The closer to home, of course, the more certain that superiority, and it was a bold and relatively rare German airman who ventured over English soil by daylight in 1942. Once in a while, a *Rotte* of fighter-bombers might wing in at low level, drop their bombs, and race back across the Channel,⁴ but it was far more difficult for German photo-reconnaissance pilots to carry out their assignments. Profitable intelligence-gathering required that the aircraft maintain a steady course at a selected altitude (depending on the tactical purpose of the sortie) and that such sorties be made frequently, since much of the art of photo-interpretation lay in comparing photographs of the same area taken at relatively short intervals. Ideally, such sorties should be flown whenever the weather was suitable – perhaps once or twice a week – but only rare combinations of weather and circumstance made that possible for the Luftwaffe. One set of photographs a month, which was all that the enemy could manage in the late spring and early summer of 1942, permitted little comparative analysis and ensured that only an uncommon combination of pure chance and intuitive interpretation was likely to reveal anything of significance.⁴

There were no such revelations concerning Jubilee. One incomplete reconnaissance was carried out between 28 and 31 July, after Rutter had been abandoned, but the next – flown for the first time by a pressurized Ju 86P, with

⁴ As they did at 0615 hours on 7 July 1942, hitting two ships anchored in the Solent and already loaded with Canadian troops destined for Dieppe in the course of Operation Rutter, the first (and subsequently abandoned) version of Jubilee. Their bombs failed to explode, passing right through the hulls of the ships and causing only four minor casualties.

an operational ceiling in excess of 41,000 feet* – was not until 24 August, five days after the raid.⁵ Thus their most reliable form of intelligence, photo-reconnaissance, gave the Germans no forewarning of the biggest raid yet mounted against Hitler's Festung Europa.

The aim, from an air perspective, was identical to that long – and so far, vainly – embraced by Bentley Priory: to create conditions that would compel the Luftwaffe to come up and fight on British terms. RAF intelligence estimated that approximately 260 German fighters were based within range of Dieppe, and in addition the enemy had about 120 bombers within easy reach which could threaten both troopships and naval escorts. The Fighter Command order of battle for Dieppe included forty-eight Spitfire squadrons – four of the new Spitfire IXs, forty-two of Vs, one of VBs, and one in the process of converting from VBs to VIs.⁶ Altogether, in Spitfires alone, the RAF had more than triple the German fighter strength, and finally, after almost three years of war and a decade of technological development, a few British fighters would match the Germans in quality as well as quantity. The Spitfire IX was 'outstandingly better than the Spitfire V, especially at heights above 20,000 feet,' according to the RAF's Air Fighting Development Unit. 'On the level the Spitfire IX is considerably faster and its climb is exceptionally good ... Its manoeuvrability is as good as the Spitfire V up to 30,000 feet, and above that is very much better. At 38,000 feet it is capable of a true speed of 368 mph, and is still able to manoeuvre well for air fighting.' It could thus match the Focke Wulf 190 and Me 109F.⁷

As well as the Spitfires, eight Hurricane squadrons (two carrying bombs, the rest armed with four 20-millimetre cannon) were available for close support, while three of the new Hawker Typhoon squadrons were assigned to diversionary tasks. Four Mustang squadrons of Army Co-operation Command (including the two Canadian units, Nos 400 and 414) were assigned to provide continuous reconnaissance of the approaches to the Dieppe area. Five light bomber squadrons – three of Douglas Boston IIIs from Bomber Command's No 2 Group and two of Blenheims from Army Co-operation Command – were on hand for tactical bombing and smoke-laying. Completing the air order of battle were a few 'Intruder' versions of the Boston III (two of these from No 418 Squadron), carrying a smaller bombload and four 20 millimetre cannon as well as the standard four machine-guns, together with two squadrons of B-17 heavy bombers from the United States Army Air Forces which were assigned to attack the nearest German fighter airfield, at Abbeville. All, except for the B-17s, would operate under the control of Air Vice-Marshal Trafford Leigh-Mallory, sitting in No 11 Group's operations room at Uxbridge, just west of London.⁸

* No current Spitfire could match that, but in September a high-altitude version of the De Havilland Mosquito, capable of reaching 42,000 feet, was waiting for the next incursion by a Ju 86P. The Junkers was beset by technical problems, however, and its sorties met 'with very little success.' It never reappeared in the west.



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the Directorate of History.

Leigh-Mallory had designated Air Commodore A.T. Cole as his personal representative aboard the raid headquarters ship, HMS *Calpe*, which also carried the ground-force commander, Major-General J.H. Roberts of the Canadian Army. With Cole was an air controller and a signals officer, while another air controller was in HMS *Fernie*, the alternate command ship. Pre-planned air operations were closely coordinated with proposed sea and ground movements, but the two controllers supposedly had the necessary command and signals capabilities to exercise a measure of independent, 'on-scene' authority over aircraft in their vicinity. Appropriately enough, the controller on *Fernie* was responsible for coordinating air cover, while close support was to be fine-tuned by the controller on *Calpe*.

The first aircraft left the ground at 0422 hours, when two Bostons from each of Nos 107, 418, and 605 squadrons set out across the Channel to bomb the key coastal defence batteries at Berneval and Varengeville at 0445. One of the two machines from No 418 returned to base after developing engine trouble on the outbound flight, while the other was shot down. Nor does it seem that any of the four RAF Bostons succeeded in hitting – or even threatening – their targets, since both were still intact when British commandos arrived on the scene some thirty to ninety minutes later. Just as No 418's Boston went down, and about the time the first Canadian soldiers struggled ashore at Pourville, the first Spitfires appeared, two of them attacking a lighthouse west of Dieppe which was thought to be an observation post for the coastal battery at Varengeville. Fifteen minutes later more Bostons and Hurricane fighter-bombers attacked the coastal batteries again, and this time major damage was inflicted on the Varengeville site, currently under attack by commandos, when charges stacked beside the guns were blown up by some projectile. (The commandos attributed the explosion to a bomb from their mortar, but German accounts blame fire from low-flying aircraft.)⁹

Forty-five minutes before that, at 0520 hours, Bostons and Blenheims had laid a smoke screen over the headlands overlooking the Dieppe foreshore and along the waterfront in order to shroud the approaching landing craft from view, while cannon-firing Hurricanes swept in across the esplanade. 'The main targets consisted of guns hidden in caves in the actual headlands and also a row of houses along the front which contained guns and were strengthened with concrete,' although later reflection led to the belief that 'we might have achieved more by using the *Cannon fighters and Hurri-bombers* against the 6" [*coastal defence*] Batteries and the *Bostons* for the attack of houses on the front at low level.'¹⁰

For those air-support demands which could not be pre-planned, lessons laboriously learned through trial and error over the past two years were simply not applied. Army Co-operation Command had developed a system of Air Support Signals Units (ASSUs) who should have been able to use their own radio nets – called tentacles – to transmit requests for support directly to an Army Air Control Centre aboard *Calpe*. The latter, jointly manned by army and air force officers, would evaluate requests and establish priorities, issuing the appropriate orders directly to squadrons, where air liaison officers

(ALOs) would brief pilots, giving them a soldier's perspective of their goals and tasks.

This system, which deliberately bypassed an assortment of specialized army and air force headquarters, had been designed to respond more quickly to the often unpredictable realities of ground combat. Fighter Command, however, not Army Co-operation Command, was running the ground-support aspect of Jubilee, and there had been little coordination and cooperation between them. Requests for support originating with brigade headquarters on the beaches – consisting of the brigadier, his brigade major, and three or four signallers – were passed through the army command radio net to Roberts's staff (Cole and his controller) aboard *Calpe* and then retransmitted to No 11 Group HQ at Uxbridge. Uxbridge, after due consideration, then issued instructions by telephone to an appropriate sector station which, in turn, ordered off aircraft to fulfil them.¹¹ The procedure was clumsy and slow; worse, it failed to discriminate in any realistic way between suitable or unsuitable targets, nor did it provide any knowledgeable advice on how targets might be identified and attacked. Especially frustrating to those who had worked at developing the new system was the way in which the expertise of ALOs at the airfields was jettisoned by both ground and air commanders. 'At Fighter Command [Lieutenant-Colonel] Ralph Stockley had not even been let into the secret [of the raid], and his assistant at 11 Group, where Leigh-Mallory fought the air battle, had been "frozen out." There were no ALOs with the Fighter Squadrons who carried out low-level attacks and therefore no adequate briefing, no ASSU tentacles forward to the beaches and backward to the airfields.'¹²

The air superiority battle, understandably, went much better. For the first hour after the initial landings, while six fighter squadrons orbited overhead, the Luftwaffe hardly challenged, but 'enemy fighter opposition, which had been only moderate in the earlier period of the operation, began to increase appreciably about the time [0715 hours] No 403 arrived to give low cover for the ships lying off the beaches.' Flying Spitfire VBs, three pilots of No 403 claimed to have destroyed six enemy fighters, while the squadron lost three of its own. Between 0730 and 1050 hours both sides intensified their effort, air activity eventually peaking during and after re-embarkation, when nine RAF and RCAF squadrons were engaged. During this later phase, two pre-planned diversionary air raids vainly attempted to distract and disrupt enemy fighter control systems. In one, four Spitfire IX squadrons (including Nos 401 and 402) escorted twenty-four B-17s of the United States Army Air Forces on their first operational mission to bomb the German fighter base at Abbeville-Trucat, while in the other a Typhoon wing protected nine Boulton-Paul Defiants which attacked shipping in Ostend harbour.¹³

The intensity of opposition over Dieppe seems to have varied considerably and bore little relation to the number of Allied aircraft actually present. No 411 Squadron flew 'four operational sweeps during the day, the first being the only one that provided much activity.' It, like Nos 403 and 416, was flying Spitfire VBs and, after its first mission in which two pilots were lost and another slightly wounded, 'the pilots reported that they seemed outnumbered 3 to 1,

that the top cover squadron was too high to provide protection, and our aircraft too slow to compete with FW 190s.' Nevertheless, they claimed a half-share in one FW 190 destroyed, and another probably destroyed. On their second and third patrols they encountered no enemy aircraft, and, on the last, 'one Do 217 was seen and attacked ... It dropped its bombs about one mile from the [returning] convoy and travelled too fast for our aircraft to get within 300 yards.'¹⁴

While each fight was special and unique to the pilot involved, one man's experience may be taken as typical. Older than most of his peers, with a background in law, thirty-one-year-old Flight Lieutenant J.M. Godfrey's Dieppe battle actually began the day before the assault, when No 412 Squadron flew two defensive patrols intended to ensure that no enemy reconnaissance aircraft would find the assembling convoy. That night: 'I was in bed by 11 and was awakened rudely at 3.'

I jumped into my clothes and went downstairs for breakfast. We had an egg, which was a great treat, and by 4 a.m. we were all in the flight [room] waiting for instructions. We were told that it was to be a Canadian Army landing at Dieppe and that we were to stand by for further instructions. At 4:45 the phone rang from 'ops' and instructions were given that we were to take off with the rest of the Wing at 6 and go over to Dieppe, and stay over the town for half an hour to protect our boats from dive bombing etc. The names went up on the board and I was not down, so I sat back and relaxed.

The squadron took off at 6, and about an hour later the boys started to straggle back. Over Dieppe it had been impossible to keep the squadron together and everybody split up into twos. The sky was evidently filled with a swirling mass of Spitfires and FW 190s milling around ... Everybody had a squirt at about 3 Jerrys but it was impossible to see the results, because as soon as a pilot squirted he could be sure a Jerry was on his tail and had immediately to take evasive action. We were much encouraged when all our boys returned safely. The names went up for the second show and I was down to fly as No 2 to a lad who had had about 30 sweeps under his belt and was a very cool and cagey pilot.¹⁵

No 412 was detailed to escort Hurricane fighter-bombers on a low-level attack against artillery firing from behind the eastern headland. 'Of all the jobs that could have been assigned to us,' Godfrey thought, 'this undoubtedly was the worst.'¹⁶ As a neophyte operational pilot (he had left Canada only in April, after two years as an instructor), he kept his reservations to himself, but learned later that his distaste for low-level work was common. Pilots preferred to fight enemy aircraft, where skill and experience were the distinctive characteristics of combat, rather than face the chancy, indiscriminate, German Flak.

Rendezvousing with the Hurricanes, both squadrons flew across the Channel at sea level. Godfrey followed his leader, Pilot Officer J.N. Brookhouse, inland for about three miles, being shot at all the while by scattered Germans on the ground.

After about 3 miles, we swung to the left. I was following J[ohn], slightly to the right and about 75 yards behind ... After we had made our turn to the left we were in a bit of a gully with trees on either side and no trees ahead. The ground started to rise and there, at the top of the rise, was a big *Flak* position. We were going so fast that we were on it before we realized it. All hell was breaking loose. There were heavy ack-ack guns and I don't know how many machine guns, etc. blazing away at us from point blank range. We had come right up a funnel completely exposed. The next thing I saw was the tail of John's kite just blow away, and the fuselage break in two right behind the cockpit. His kite seemed to go slowly over on its nose. I didn't see it hit the ground as I was past [it], but one of the other lads saw it and it really spread itself all over the ground. I don't suppose poor John ever knew he was hit before it was all over.¹⁷

Godfrey found himself in the midst of the Hurricanes, which had now finished their bombing runs. Terse comments and instructions on his VHF radio told him that two more machines had been hit by *Flak*, and that their pilots were baling out. The survivors, including Godfrey, made their way over the coast through a curtain of ground-based fire, and a few minutes later another pilot reported that he was baling out over the Channel. The remainder made their way back to England.¹⁸

At 1340 hours orders came to escort more Hurricanes attacking the same troublesome guns. This time, however, No 412 was to stay offshore, ready to provide the return escort, rather than go right in with the attackers.

There were FW 190s all over the place around 2,000 feet, and we were the only Spits at our height. Some 190s started to dive down on the Hurries. We tore after them and they, seeing us coming, started to break away. Just then, someone yelled, 'Red Section, break.' There were some 190s on our tail. We went into a steep turn to the right and shook them off. I lost the others for a few seconds. The *Flak* started to come up at us in great volume. Red balls were shooting past my nose, uncomfortably close. I spotted my No 1 and joined him. Just then the CO yelled, 'Let's get out of here'. We dove down onto the sea, going all out and weaving as hard as we could. The Hurries were about two miles out to sea on the way home. We managed to keep the Jerrys busy so that none of them had been attacked. We stayed with them on the way home, weaving around them with our heads turning about 120 to the minute, looking for Huns. However, none chased us back and we landed with the whole squadron intact.¹⁹

The squadron was released at 1800 hours, then alerted for a defensive patrol an hour or so later, and finally stood down for the day at 2100 hours, without claiming any victories and having lost one pilot and two aircraft.²⁰

The newest RCAF fighter squadron, No 416, had been formed at Peterhead in Scotland on 22 November 1941, and became operational on 1 February 1942 under the command of Flight Lieutenant (very shortly afterwards, Squadron Leader) Lloyd Chadburn. Chadburn, who had tried unsuccessfully to enter the prewar RCAF, was finally accepted in 1940, but not before being turned down by both the Royal Canadian Navy and the Royal Air Force for reasons

now unfathomable. He had gone overseas with No 112 (Army Co-operation) Squadron at the end of that year, transferred to No 412 Squadron in June 1941, and to No 19 Squadron, RAF, as a flight commander in September, before being posted to command No 416. His forte was leadership and, as of the eve of Dieppe, he had still not claimed any air-to-air successes although, in November 1941, he had been credited with a relatively rare air-to-sea victory when his cannon fire was wrongly believed to have sunk an E-boat off the Dutch coast.²¹ On 19 August his squadron's first two patrols over Dieppe were uneventful, but in the course of the third it tangled with about fifteen FW 190s escorting Ju 88 bombers and claimed to have shot down three of the enemy without loss, Chadburn 'probably destroying' a Ju 88. Next day, the squadron diarist reported that '22 pilots were on one or more sorties and everyone had gained a tremendous amount of confidence from this first engagement with the enemy as a squadron.'²²

The four army cooperation squadrons had a different task, flying their Mustangs on tactical reconnaissance missions 'to discover movements of enemy reinforcements towards the area in which our Army is operating.' The most likely reinforcement routes were the roads from Rouen, Le Havre, and Amiens – there was a Panzer division based at Amiens – and each approach was covered hourly. In this case, pilots were briefed by ALOs on their missions, routes, and procedures, and pairs were dispatched in turn, the lead pilot to observe ground activities, and his wingman or weaver to watch the sky for enemy fighters. Results were disappointing, for 'although much negative information was received, the only positive information was a report of three to five light tanks 10 miles south of Dieppe. The results of this reconnaissance did not appear to justify the scale of effort or the casualties' – particularly, a cynic might think, since the report of tanks was certainly in error. The Germans were able to deal with the Dieppe raid from local resources, so, although the Panzers at Amiens had been put on alert, there were no approaching mechanized columns for the Mustang pilots to find and report. Searching for them was, however, fraught with danger.

Most sorties were flown in the immediate vicinity of the port, where roads were regularly patrolled at half-hourly intervals, but after-action analysis suggested that this 'should be discouraged. Every half hour a pilot would fly up or down the same road so that the [anti-aircraft] gun crews were ready for him. Although it is difficult to vary such tasks, irregular timing would help,'²³ a blindingly obvious conclusion, but one only achieved at a cost of ten aircraft missing. Many of the strands woven into the hazardous trade of tactical reconnaissance – aircraft performance, tactical deployment, low-level flying, luck, skill, and guts – came together during one No 414 Squadron sortie, Flying Officer H.H. Hills reporting that:

Flight Lieutenant Clarke and myself were to do a Tac/R in the Dieppe-Abbeville area. I was flying weaver. We made landfall approximately 7 miles west of Dieppe, turned east towards Dieppe. At this time I observed two Focke-Wulfe 190s at 1,000 feet; we were at nought feet at all times, travelling the opposite direction. I warned my Flight

Lieutenant of Bandits but received no answer. The enemy aircraft turned and followed us, holding his [sic] height, and made a diving attack on us as we turned south at Dieppe. Flight Lieutenant Clarke was watching his road and did not hear my repeated warnings or see the enemy aircraft himself and was weaving very slightly.

I had swung out on my leader's port [side] before the attack and both enemy aircraft were diving on him in line astern about 200 yards apart. I turned in between the two Focke-Wulfes and gave the leader a short burst from which I observed no results, other than making him stop firing at Flight Lieutenant Clarke and begin jinking. By this time the Focke Wulfe behind me had opened fire on me but his fire was passing on the port side. I was [turning] at 100 [degrees] port at the time, so I slipped violently to starboard, towards the ground. The Focke-Wulfe passed me and started a steep turn to starboard. I followed and gave him a 2 second burst from a quarter astern at 150 yards range. I observed parts flying off, and an explosion about one foot behind the engine cowling on the starboard side of his fuselage, and black smoke began pouring out of his engine. He immediately slowed down and flew straight and level. I gave him another 2 second burst from dead astern at 50 yards range. More parts came off and his cockpit cover came off. His engine was stopped by then.

I figured he was done, so turned away to go back and help Flight Lieutenant Clarke. I looked back at the Focke-Wulfe I had hit, and it went into a grove of trees with dense black smoke coming out of the aircraft. There was no explosion when he hit.

Flight Lieutenant Clarke was circling about 2 miles south of Dieppe with white smoke coming out of his aircraft, and the [other] Focke-Wulfe was about 100 yards behind him flying at the same speed. The Focke-Wulfe turned and dove south. He was at 800 feet and went down to nought feet. I followed but was unable to catch him. After about a minute chase, I saw another Focke-Wulfe at 100 feet diving on me from the starboard beam. I turned sharply into him and got on his tail but was unable to get in firing range as he ran west. I then saw the other Focke-Wulfe coming back at me from the south, so I turned north and headed for the cliffs. On reaching them I turned on the one chasing me, trying to surprise him by coming up from behind the cliff. He had climbed to about 600 feet though, so he saw my turn and tried a full deflection shot at me ... I dove down to water level and headed towards a Destroyer with the Focke-Wulfe a half mile behind me. He followed me about two miles out, gaining slowly, and then turned away south-west. I returned to base. All the fighting and manoeuvring was done between 250 and 300 mph indicated air speed.²⁴

Enemy fire had damaged Clarke's lubrication and cooling systems. He ditched his Mustang alongside a British destroyer and, according to war correspondent Wallace Reyburn, an eye-witness to the event, was picked up without getting his feet wet.²⁵

In the days that followed, it became obvious to even the most obtuse that the Dieppe raid had been a technical as well as an operational failure. Colonel C.E. Carrington, the army's liaison officer at Bomber Command and a concerned observer of army/air relationships, recorded that 'September was a flurry of post-mortem examinations at various levels ... Whitewashing apologies were issued by the top people and anguished discussions followed between the staff officers who studied technical failures.'²⁶ Carrington himself

prepared and forwarded a paper on 'the misuse of 2 Group in Jubilee, the only corner of the muddle that I was entitled to speak upon with authority.'

I examined the close-support attacks made by 2 Group bombers: the first attack missed a pre-arranged target by about two thousand yards; the second was indiscriminate bombing of a large area in which there might or might not have been Canadian troops; the third was not a suitable target. 'If they could have found it, they could not have hit it and, if they had hit it, the battle would not have been affected.' The only useful thing 2 Group did that day was to lay smokescreens, and even these prevented the Headquarters ship from seeing what happened on the beach.²⁷

The army's liaison officer at Army Co-operation Command and his counterpart in the combined operations room of GHQ Home Forces were equally depressed. They spoke gloomily of 'an Army/Co-op defeat' and complained that 'no use was made of the organization they had been patiently building up for years ... Woodall and Oxborrow said it all resolved itself to forming a mobile advanced HQ under a senior RAF officer directly linked with the military headquarters and with the airfields ... Army Co-op Command ... put out seventy-two low-level reconnaissances, and lost ten of them ... to no purpose, since they had no direct links with the forward troops.'²⁸

There had been 'a senior officer directly linked with the military headquarters' – in this case Air Commodore Cole aboard HMS *Calpe* – 'and with the airfield,' but his was not an advanced headquarters, nor was Leigh-Mallory much concerned with forward ground/air co-ordination, as yet. Flight Lieutenant C.A. Kidd, RAF, the controller on board *Calpe*, would have been happier with at least two more squadrons available for ground support, one of them under his direct control, and he complained of the lack of information reaching him. 'No signals were received by me from Uxbridge,' he reported, 'so that it was not known what targets had been accepted and what squadrons were on their way.' Nor was he able to obtain current information from the troops on shore, recording that, in his opinion, forward controllers needed to be close to the leading troops, where they could actually observe the flow of battle and talk directly to pilots over VHF radio.²⁹

Even the Germans thought that 'the employment of the enemy air force and the tactics were extraordinary.' Generalfeldmarschall Gerd von Rundstedt, commander-in-chief in the west, found it 'incomprehensible why, at the beginning of the enemy landings, the Dieppe bridgehead* and other landing places were not isolated by a continuous curtain of bombs so as to prevent, or at least delay, the employment of local reserves.'³⁰

From the Olympian perspective of No 11 Group's operations room, however, Leigh-Mallory felt that 'the excellent communications and flexible control facilities of the normal fighter organization at home proved most efficient for such combined operations,' and concluded that it 'would be most undesirable,

* The scale of the raid led von Rundstedt to view it (wrongly, of course) as a tentative invasion, to be reinforced if successful.

if not dangerous, to vest more control in the ship than is absolutely necessary.' In his view control was best exercised through the existing Group-Sector system – one which could readily be adapted from defensive to offensive purposes.³¹

Squadron Leader J.H. Sprott, RAF, *Fernie's* fighter controller, could not have disagreed more, arguing that authority should be vested further forward.

Being in control of only the lowest Squadron of Fighters was a disadvantage, and I could never be quite sure which was the lowest Squadron ... In any future operation of this nature the Fighter Controller should have at least four Squadrons under his control during the [period of] greatest activity, and two at least under decreased activities ... He should then be able to detach, or request the Squadron Commander to detach, the appropriate number of aircraft to deal with any hostile aircraft ... This suggestion is, I am certain, sound, as on numerous occasions during the operation when enemy aircraft were seen approaching, more than sufficient Fighters attacked, and in some cases one or other side approaches to the Convoy were left open.³²

In other words, forward air control faced a problem analogous to fire control in army units; without proper direction and supervision, soldiers might concentrate all their fire on one small group of the enemy, allowing others to escape unscathed or even overrun their position.

From an air-to-air perspective, Jubilee could well be categorized as a super-Circus in which Dieppe was the target and the bomber element had been replaced by troops of the 2nd Canadian Infantry Division. Viewed in that light, it was certainly not the disaster for the RAF/RCAF that it was for the Canadian Army. Indeed, it marked a significant turning point in the progress of the fighter offensive, a point from which the RAF and RCAF really began winning the battle of attrition, though their losses would be more than twice as great as those of the Luftwaffe for some months to come. Although the earlier Circuses and Ramrods had produced a *perceived* loss rate (by the British) of approximately two of their own machines for each German, the true ratio had been better than four to one. Jubilee, in which the RAF/RCAF had lost ninety-nine of its own machines while claiming ninety-one enemy aircraft destroyed, with thirty-eight 'probables' and 140 damaged, seemed eminently satisfactory in comparison; and although the correct figure had been only forty-eight German losses (with no more than twenty-four damaged),³³ the actual ratio was similar to the perceived – and acceptable – one of the preceding campaigns.

Nine RCAF squadrons – six fighter, two fighter-reconnaissance, and one Intruder – had been committed, losing fourteen aircraft and nine pilots, with another ten machines damaged and three pilots slightly wounded. They claimed, in return, to have destroyed ten enemy aircraft, with two more probably destroyed and fourteen damaged – the squadron counts ranging from No 412's loss of two machines and one pilot without causing any injury to the enemy to 416's claims of three destroyed, one probable, and seven damaged with only two of its own machines requiring repairs.³⁴ In evaluating such

claims, however, the excitement and confusion of battle and the natural tendency among pilots fighting for their lives to declare an enemy aircraft destroyed even if they did not actually see it hit the ground must be taken into account. It seems likely that the RCAF balance sheet on this occasion was very similar to that of the RAF – two or two-and-a-half losses for each victory.

No German bombers had been involved in the air battles that accompanied the Circus and Ramrod operations of the past eighteen months; but at Dieppe enemy bombers had been brought into play, and better than half of the Luftwaffe's losses consisted of light and medium bombers, while the RAF lost only six of those types. The totals of fighters and fighter-bombers lost were eighty-nine RAF/RCAF to twenty-three Luftwaffe, or a ratio of roughly four to one – only fractionally better than that incurred in earlier Circuses and Ramrods. The RAF/RCAF lost sixty-eight pilots, fifty-one killed and seventeen taken prisoner, all but four of them from single-engined machines. German aircrew losses are not known, but were probably not more than thirty pilots. On the evening of 19 August only seventy of the 230 German fighters that had been serviceable that morning were still combat-ready, but hasty repairs and immediate deployment of reserves brought the number up to 194 before dawn on the 20th, although one after-action report recorded that 'there were no further reserves available.'³⁵

Strategically, the Luftwaffe's predicament was growing worse as the Germans were now beginning to pay the price for thinking only in terms of a short war and for the overconfidence inculcated by the relatively easy successes of 1939 and 1940. Winston Churchill's prewar propaganda strategy of maximizing the Luftwaffe's strength and exaggerating its potential had terrified Britain and the Soviet Union (and worried the United States), and all three powers set high targets for aircraft manufacture even before the outbreak of war. Production rose steadily thereafter. In January 1940 the number of British aircraft coming off the assembly line was already better than 50 per cent higher than that in Germany, and a year later the British doubled their monthly output while the enemy only increased his production by half. The Germans began closing the gap early in 1942 as the so-called Göring expansion program went into effect,³⁶ but, by then, the Luftwaffe was fighting the Russians as well as the British and Americans, and was losing most of the increase to the apparently insatiable appetites of the Eastern front. Meanwhile, American production was gearing up to previously unimaginable heights.

What was Bentley Priory going to do with all these aircraft? For the time being pilots would continue to defend the British Isles while preparing for the cross-Channel amphibious assault on Festung Europa that American entry into the war made both possible and inevitable. Until the Allies actually invaded Northwest Europe, however, Douglas's March 1942 directive – to bring the Luftwaffe into the air, where 'we shall inflict casualties in the fighting whilst the additional flying which is forced upon the enemy will increase his normal wastage' – continued to determine operational goals.³⁷

In the aftermath of Jubilee there was still little enthusiasm among the fighter staff for the idea of committing fighter aircraft to the ground battle. Moreover, with no immediate prospect of a campaign in Northwest Europe – and little likelihood of another major raid on the Dieppe scale – there was no apparent incentive to train squadrons in such tasks, while occasions to challenge the Luftwaffe for air superiority in more glamorous air-to-air combat were relatively plentiful in the skies of northern France, Belgium, and the Netherlands.

Perhaps equally influential in limiting the fighter to its traditional role, however, was the lack of any weapon-system both powerful and precise enough to be useful on the battlefield that could be carried into combat by fighters or fighter-bombers. Bombs, effective enough when they hit the target or only narrowly missed it, could still be aimed at low level only by 'guesstimate,' while machine-gun or cannon fire lacked the requisite hitting power to destroy hardened targets or the sustainability to neutralize them for any significant length of time. Rocket projectiles, in the form of a 3-inch rocket with alternative warheads – high-explosive or armour-piercing – which to some extent combined the advantages of bombs and cannon shells, were in the experimental pipeline but would not reach squadron service until mid-1943.³⁸

In the Middle East, however, the potential significance of tactical air power was becoming clearer every day, whatever its shortcomings. The ground and air commanders there, General Sir Bernard Montgomery and Air Marshal Sir Arthur Tedder, were both quick to appreciate the possibilities opened up by air support of ground forces, once air superiority had been achieved. That had come about with the arrival of the first Spitfires in the Western Desert, in the summer of 1942, and more and more the DAF was committing light bombers and fighters to the land battle. When Feldmarschall Albert Kesselring, the Luftwaffe officer who had just been appointed Oberbefehlshaber Sud (C-in-C South) visited the Afrika Korps after El Alamein, he was soon reporting to Hitler that, 'for the first time the RAF has appeared in sufficient strength to be a decisive factor in the [ground] battle.' From his perspective worse was to come, as he rightly predicted that 'this is probably only the initial phase of the stepping-up of Allied air activity which we must expect.'³⁹

In the United Kingdom, General McNaughton had a similar faith in the potential of airpower to influence the land battle directly. Working from the perspective of army cooperation, his ideas (and demands) went deeper than those of any British general except, perhaps, Montgomery. He had been pushing hard for the creation of army co-operation wings since March 1942, envisaging a tactical air force that might eventually provide 'not less than five squadrons for each division.'⁴⁰ At the time, that ratio must have seemed ludicrous to most air and ground commanders and their staff officers – although by the end of the war there would be better than four squadrons of Second Tactical Air Force to each division, or equivalent, of 21st Army Group.

With the upcoming conversion of the 4th Canadian Infantry Division into an armoured formation, a third army cooperation squadron would be required but there had, as yet, been no decision as to whether the new unit would come

from Canada or be formed in the United Kingdom. Meanwhile, McNaughton continued to pursue his policy of constituting a full, three-squadron wing under the command of First Canadian Army, finding an ally in Air Marshal Harold Edwards, who, on 5 September, approved the organization of such a formation by 15 November 1942.⁴¹

In the early part of that month, McNaughton and staff officers at Fighter and Army Co-operation Commands ironed out the final details for the formation of 39 (RCAF) Reconnaissance Wing headquarters. Only one of its two squadrons – Nos 400 and 414 – would train with the army at a time, though they would both retain close personal liaison with I Canadian Corps and the 5th Canadian Armoured Division – each of which, according to plan, would be allocated one of the squadrons when operations began. In November, No 414 was still listed on the 5th Division's order of battle but, effective 4 December, both squadrons would come under command of 39 Wing, itself attached to First Canadian Army, and 'squadrons which are released from their Army commitments will undertake active operations in affiliation with Fighter Command, under the control of 39 Wing.'⁴²

Associating squadrons of Army Co-operation Command with Fighter Command in this manner was evidence of the former's difficult position in the airpower hierarchy. It was, in effect, only an air force in theory, for no one yet knew when or how it would make its contribution towards fighting the Germans on the ground. As one staff officer pointed out, 'During the present defensive period of the war the Corps and Divisions of the Army have not sufficient use for Army Co-operation Squadrons to keep them fully employed.' Even so, another RCAF army cooperation unit would be mobilized at the end of the year, with the formation of No 430 Squadron.⁴³

The idea of concentrating Canadian squadrons to create larger formations was not limited to army cooperation units. In the summer and fall of 1942 there were seven RCAF day-fighter squadrons in Fighter Command, and during a summer visit to Britain Air Minister Power, in discussions with Sholto Douglas, broached the possibility of creating Canadian stations. Douglas promptly agreed that Redhill (Biggin Hill sector), Digby (Digby sector), and Fairwood Common (Fairwood Common sector) could be completely Canadianized. An RCAF wing would also be established in the Kenley sector (and hence be informally known as the Kenley wing). Indeed, at a later date it might be possible to allocate an entire sector in No 11 Group to the RCAF.* Meanwhile, on 16 September, RAF Digby became RCAF Digby under the command of Group Captain A.E. McNab, DFC.⁴⁴

In September, as the Allies probed the possibilities of an invasion of Northwest Africa (Operation Torch), fighter operations over Northwest Europe decreased in intensity. Through the last four months of 1942 the RAF/RCAF flew less than half the number of offensive sorties than in the period from

*As will be seen, the formation of No 83 Group a year later forestalled any plans to create a Canadian sector.

March to June.⁴⁵ When Spitfire squadrons operated on offensive missions, they were likely to support the USAAF which, since August, had been testing its doctrine of formation precision bombing by daylight in attacking targets in France. The tendency towards ever-larger escort formations protecting 'boxes' of bombers meant that leadership was more important than ever if missions were not to fall apart through a missed rendezvous or poor flying discipline. J.E. Johnson's description of his duties gives some indication of a wing leader's burden in the autumn of 1942.

My job would be to lead and to fight. To bring the greatest number of guns to bear against the enemy in the shortest possible time. To cut down losses to a minimum and to avoid the bad bounce. To control the progress of the engagement and to keep the whole wing together as a fighting force and not get split up into isolated, ineffective packets – by far the most difficult task. These goals could only be achieved through a high standard of flying, perfect discipline and strict radio drill.⁴⁶

That, of course, was the principle; in practice, any significant opposition could, and did, break up and disperse fighter formations. A typical example can be found in a 6 September mission involving Nos 401 and 402 Squadrons. They were escorting B-17s on a strike against the Avion Potez aircraft factory at Meaulte, used extensively as a repair facility. Despite attempts at suppressing fighter opposition by diversionary bomber strikes against the fighter fields at St Omer/Longuenesse and Abbeville/Drucat, the bombers were harassed continually while in French airspace.⁴⁷

The 26 Fortresses arrived at the rendezvous five minutes early and did not wait for the four Spitfire squadrons of the escort to form up; as a result the whole formation was badly dispersed and some 30 enemy fighters, attacking in small groups, were able to harass both the bombers and the Spitfires. Heavy *Flak* was again encountered and several of the bombers were hit, one being lost. The results of the bombing could not be observed. On their way in to the target, Blue section of No 401 became detached during a skirmish and was heavily engaged throughout the remainder of the operation. The only claim made however was by F/Sgt E. Gimbel who inflicted damage on one FW. No losses were suffered by this section or squadron but Sgt G.J. Roan of No 402 had to bale out over France and was taken prisoner.⁴⁸

Circus 224 on 9 October (the largest to that time) saw more than one hundred Fortresses and Liberators, with Nos 401, 402, and seven other fighter squadrons as escorts, strike at the Fives-Lille locomotive works – a far cry from the days, only eighteen months earlier, when a *single* Stirling bomber had served as bait. Several diversionary sweeps involving Nos 412, 416, and 403 Squadrons were supposed to distract the enemy, but the Luftwaffe was not fooled. The main attack 'encountered intense heavy *Flak* along the route and one bomber was seen to crash and three more did not return ... Several engagements occurred in which F/Lt G.B. Murray and F/Sgt E.L. Gimbel shot

down an FW which was seen to crash. F/Lt Murray also damaged a second fighter of the same type.⁴⁹

No pilots were lost on that occasion. Already the Germans were pulling their fighters back, deeper into France, to avoid having them destroyed on the ground, and were relying more and more on anti-aircraft artillery to defend targets in northern France and the Netherlands. There were over 5500 heavy, and 15,000 medium and light, Flak guns deployed in the west* by the end of 1942, representing a heavier investment in anti-aircraft artillery (and gun crews) than on all other fronts combined. This growing emphasis on Flak was an unmistakeable indicator of the Luftwaffe's decline, marked by inadequate training due to fuel rationing and the unending need for reinforcement pilots. Already the fourth Gruppe of each Geschwader, which had acted as a reserve training squadron, had been disbanded, its pilots needed in Russia and North Africa. German trainees now flew no more than 160 training hours on machines that bore little resemblance to the fighters they would finally be assigned to, while Commonwealth pilots were receiving as much as 360 hours of advanced training on fighter-type aircraft.⁵⁰

For the RCAF, the year 1943 started as 1942 had ended. January activities for Nos 401 (switching from Spitfire IXs to VBs as it moved to a quieter sector), 402 (IXs), 412 (VBs), and 416 (VBs) included nine Circuses, which generally met with little opposition, while Nos 403 (VBs to IXs), 411 (VBs), and 421 (VBs) concentrated on defensive patrols and scrambles. Perhaps the most exciting operation of the winter was part of a series of Ramrods on 17 January involving Nos 401, 402, and 412 squadrons. Their first sorties, at 1105 that morning, were routine, but 'less than two hours after their return the three squadrons took off again to repeat the operation.'

The ground strafers were most successful, No 412 attacking six locomotives in the area around Yvetot, while No 401 shot up three trains near Fontaine, Cany-Barville and Bolbec. The first, a coal train, was badly damaged and forced to stop by the pilots of Blue section, who also shot up a factory or distillery southwest of Fontaine. While the Spitfires were engaged on this ground-strafe about a score of FW 190s began bouncing them in diving attacks from the sun ... Many individual dogfights resulted as the fighters swirled about over Bolbec. W/Cdr J.C. Fee, DFC, who had led both the day's operations, took the brunt of the attack and both he and his number two Flying Officer M.J. Sunstrum, were lost.⁵¹

A posthumous Bar would be added to Fee's DFC a month later, the citation noting that he was 'a brilliant leader who has set a splendid example of courage and determination.'⁵²

In the first twelve days of March 1943 Exercise Spartan provided pilots and groundcrew with an opportunity to experience life in the field, as it rehearsed air and ground forces in the expansion of a bridgehead which planners saw as

* This total includes those protecting the German fatherland.

the third phase of invasion operations, after the assault and the establishment of a lodgement. From an air perspective, it was 'a full scale try out of the use of a Composite Group, consisting of light and medium bombers, day and night fighter and fighter reconnaissance [army cooperation] squadrons working through a common operations room in direct contact with the army commander.' Taking the role of invader was First Canadian Army, supported by six army co-operation squadrons, including Nos 400 and 414, seven fighter squadrons, including No 412, four army support squadrons (destined to become Typhoon units), and two light-bomber squadrons. The British defenders had similar air resources which included Nos 411 and 421 squadrons. Within each 'army,' air action was co-ordinated with the land battle through a composite air group organization which could mount a variety of missions, with the group's commander operating from army headquarters, thus guaranteeing close liaison.⁵³

The concept of the composite group proved so sound that the Air Ministry's director of organization decided to retain Z Group headquarters, which had been formed to support First Canadian Army on the exercise, as a permanent component of the RAF's order of battle. Effective 1 April 1943, staff were posted to it and the new organization was designated No 83 Group, with headquarters at Redhill. In the next few months this staff would oversee the development of subsidiary headquarters and administrative units, including supply and transport, repair and salvage, and a mobile field hospital. One or two at a time, several squadrons joined the group to familiarize themselves with the new organization, and headquarters organized short training exercises for their benefit. The first RCAF units to arrive, Nos 400 and 414, began setting up their tents on 4 July.⁵⁴

In March 1943, at the end of winter, the operational tempo for Fighter Command squadrons had reached a five-month low, but thereafter it increased steadily until September. In mid-April Air Marshal Sir Trafford Leigh-Mallory, who had succeeded Douglas as AOC-in-C, reassessed some of Bentley Priory's objectives. Though 'the destruction of enemy aircraft and the pinning down in North-Western Europe of the maximum enemy air forces remain our primary aims ... the enemy cannot effectively be brought to battle in the air unless worth-while targets in enemy occupied territory are attacked.' Therefore, 'our major fighter offensive operations must be in co-operation with bombers of the British and United States Bomber Commands, and with our own fighter/bombers.' In other words, more Ramrods; and as these became progressively larger – posing a greater threat to the enemy, at least in theory – protecting the bombers would become a more complex business. Since, generally speaking, British fighters were best able to combat their German counterparts at medium altitudes, bombers – the Luftwaffe's target – would fly at ten thousand feet in order to bring about medium-altitude battles. Some fighters, however, were better fitted to provide high cover while others were more suited to medium-level work, requiring a division of labour between Spitfire IXs, which would fly well above the bomber formation, and Spitfire Vs, which would provide close escorts below 15,000 feet.⁵⁵

Tactics, too, became ever more sophisticated as more bombers were incorporated into Ramrods and staff officers brought ever more covering fighters to bear. In mid-1943 Bentley Priory, following the advice of No 11 Group, increased the number of fighter wings escorting bomber formations. To what was already an impressive conglomeration of aircraft, organized into escort wing, escort cover wing, high cover wing, target support wing, forward support wing, and rear support wing, tacticians added a 'bouncing' wing, whose role was to range far afield from the bombers and surprise enemy fighters as they took off or climbed to engage the main formation, together with a 'rover' wing that flew virtually independently in the general area of the Ramrod target and routes, with the simple objective of destroying any enemy aircraft which crossed its path. Not all these wings would be necessary all the time; for example, a forward support wing might be dispensed with for attacks on targets close to the coast.⁵⁶

A continent away from Bentley Priory, on the grossly overcrowded outpost of Malta, some sixty miles off the southern tip of Sicily, Canada's representative fighter squadron in the Mediterranean theatre was one of the Desert Air Force units participating in the pre-invasion phase of Operation Husky – the combined assault on Sicily that, just one week later, would make the first permanent breach in the coastal defences of Festung Europa. 'One of the disadvantages of Malta is that the squadron is so scattered,' moaned the squadron diarist. 'Officers living in the Modern Imperial Hotel in Sliema, NCO pilots in the Balluto Hotel on St. Julian's Bay ... the ground NCOs in the Malta Poorhouse, near Luqa village, and the airmen in tents in fields and quarries in the valley below the aerodrome.'⁵⁷ Rank clearly had its privileges in No 417 Squadron.

Despite being 'so scattered,' the Canadians were much better off on Malta than they had been at Port Tewfik, in the Gulf of Suez, when they had first arrived in the Middle East thirteen months earlier. Then No 417 had been a fighter squadron without fighters; and even when aircraft did appear, the squadron's lot had not been a happy one during the intervening year. Its frustrations had been many and its gratifications few throughout the North African campaign.

The airmen had been told that Spitfires would be awaiting them at Tewfik, but Luftwaffe successes in the desert, its pressure on Malta, and the unexpected demands of the Far East had turned British logistical planning on its head and the supply pipeline into a shambles. Because of the compelling needs of Malta, only enough Spitfires had been available in Egypt to equip one of six newly arrived squadrons – an experienced RAF unit – which was soon in action.* Another squadron was sent to Cyprus, and three more were broken up to reinforce other units in the Western Desert which were being badly battered by the Luftwaffe. But, for political reasons, there could be no question of breaking up the RCAF squadron, even though not every Canadian was in favour

* The DAF's standard fighter in mid-1942 was still the Hurricane II, no match for the Messerschmitt 109E, never mind the 109F.

of Canadianization if it interfered with the prospect of seeing action. Forty-five years later the officer who took No 417 to the Middle East, ex-Squadron Leader Pitcher, recalled 'most emphatically' that 'at no time was the suggestion made to me that the squadron should be split up to reinforce other squadrons already in action. If it had, I and all the other pilots would have jumped at it as we were thoroughly fed up with the existing state of inactivity ... maintaining the separate identity of Canadian units often took precedence over the expeditious prosecution of the war.'⁵⁸

Although there was much frustration and dissatisfaction at the time, perhaps the pilots of No 417 were lucky that their squadron was neither broken up to provide reinforcements, nor issued with obsolescent aircraft and sent forward into battle. Nevertheless, their misfortunes during the ensuing six months were subsequently outlined in High Commissioner Vincent Massey's December complaint to the Dominions Office (at the behest of the War Cabinet in Ottawa), in partial response to a British desire to transfer two RCAF bomber squadrons to the Middle East.

A Canadian Fighter Squadron was sent to the Middle East the first week in June, 1942, but did not receive its aircraft until the first week in September and it was then supplied with aircraft 'rejects' from the Fighting French which had to be replaced by other Hurricanes. This squadron had been an efficient Spitfire Squadron in England but was assigned to air patrols over the Nile Delta, well behind the front line. It has not been able to get into action ... although less experienced squadrons similarly equipped have been given the opportunity to engage in active operations in the Western Desert.⁵⁹

As has been explained, there were some good reasons why the Canadians were not yet flying Spitfires, and it was simply not true that 'less experienced squadrons similarly equipped' had received better opportunities. Nevertheless, Massey's intervention may well have proved fruitful as, by the end of the year, Tedder would decide 'that I can start at once to rearm fully No 417 Squadron with Spitfires and will transfer it to the Western Desert for operations in the near future.'⁶⁰

Even for those who do the fighting, war can be a tedious exercise, with long periods of inactivity preying on morale; and No 417 had faced more than its fair share of boredom. After months of ferrying aircraft (across Africa from Takoradi, on the west coast, to Egyptian bases), servicing B-25s, and otherwise doing all manner of things but make war, the squadron had become operational, on obsolescent cannon-armed Hurricane IICs, on 13 September 1942.⁶¹ The Canadians were, however, kept largely out of harm's way on anti-reconnaissance patrols over the Suez Canal. Encounters with the enemy were rare, and usually marred by the failure of the Hurricanes' cannon, so the unit managed only a single victory, a Ju 88, on 26 September. Two pilots were killed in operational accidents. The only other event of note during this period was the replacement of Pitcher (whose health had been a source of some concern since a bout of pneumonia in 1941) by one of his flight commanders, newly promoted Squadron Leader F.B. Foster, on 16 November.⁶²

The Canadians acquired their first Spitfire VBs and VCs in October 1942, and carried out their last operation with Hurricanes on 13 January 1943.⁶³ Finally able to fight on technologically near equal terms, but not tactically – the DAF still employed the abominable vic – the squadron was ordered to Tripoli, the recently captured Libyan capital, in mid-February, where it became part of No 244 Wing. For the moment, however, duties were still similar to those performed in Egypt, as its pilots flew defensive patrols over the ships bringing supplies into Tripoli along the Libyan coast. It was not stimulating work; in nearly five hundred sorties flown between 27 February and 11 April 1943, pilots saw the enemy only twice, and even then could not get close enough to engage.

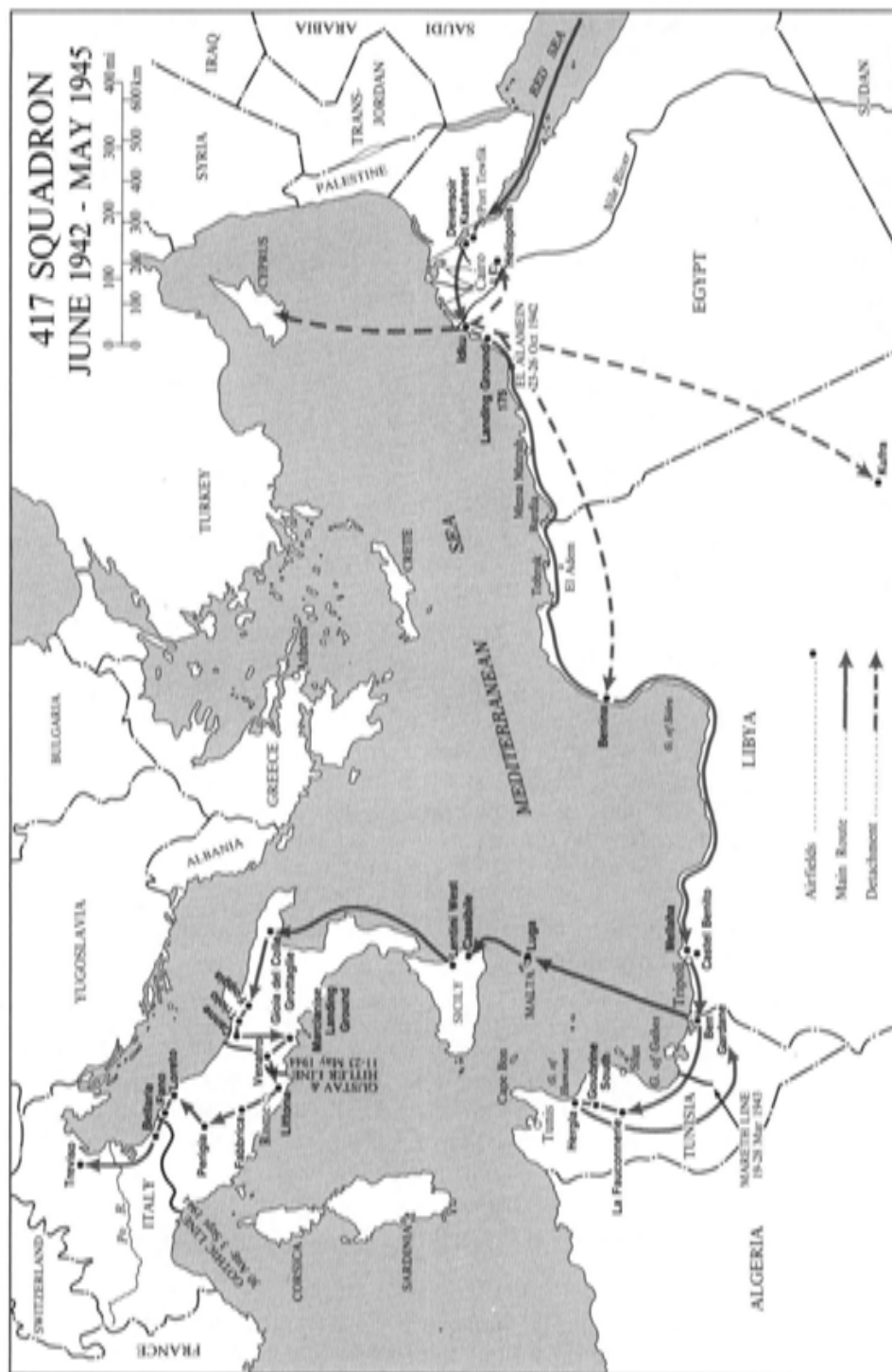
In mid-March the commanding officer led half the squadron further forward, to Ben Gardane, across the Tunisian border. There, they flew one convoy escort, on the 22nd, and shot down a Heinkel 111 in a one-sided combat – six Spitfires against the lone bomber – before being assigned to protect Allied light bombers harrying German forces retreating from the Mareth Line. Six uneventful days passed before they rejoined the rest of the squadron at Mellaha,⁶⁴ and the whole unit finally caught up with No 244 Wing at Goulvine, a hundred miles south of Tunis, on 11 April 1943.

The enemy was now squeezed into a Tunisian enclave nowhere more than fifty miles deep, and the air battle began to increase in intensity as the Luftwaffe struggled to protect the tenuous German supply line – by air and sea – from Sicily and to frustrate Allied air support of ground forces. On 19 April twelve of No 417's pilots were covering Kittyhawk fighter-bombers attacking ground targets at low level when they were surprised by more than twenty Me 109s, probably flying out of Sicilian bases. In the mêlée over the Gulf of Tunis that followed, the Germans shot down four of the Spitfires,⁶⁵ and survivors' reports make it clear that the Canadians still had much to learn. They were caught completely unawares by aircraft attacking out of the sun in pairs and 'finger-fours.' One of the Canadians, a very lucky Flying Officer E.W. Mitchell, 'immediately did a steep turn to port and on completing the turn found one Me-109 in my sights.'

I opened fire at extreme range and closed to about 200 yards, using up all my ammunition in the process. Just before my ammunition was exhausted the Me-109's belly tank dropped off together with pieces from [its wing] root and large quantities of black smoke poured [sic]. Toward the end of my attack I noticed tracer near my port wing. As soon as my ammunition was exhausted I took violent evasive action and discovered four 109s on my tail. After doing a steep spiral down to sea level I headed for the coast with two 109's on my tail ... Halfway across the peninsula one aircraft left me and I continued to the east coast with one 109 after me ... I shook [off] the last enemy aircraft and continued to base.⁶⁶

The enemy held his shrinking Tunisian perimeter for another three weeks (Bizerta and Tunis both fell on 7 May, the former to the Americans, the latter to the British), finally surrendering the Cape Bon redoubt on 13 May. During

417 SQUADRON
JUNE 1942 - MAY 1945



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that time the air fighting was often as intense as that on the ground, but No 417 Squadron played little part in the battle, most of its effort being expended on uneventful anti-shipping patrols; one pilot did succeed in shooting down an Italian fighter, a Macchi 202, on 28 April. The most exciting event recorded by the squadron diarist during the final week of fighting was on 6 May, when the officers' mess tent burned down.⁶⁷

Meanwhile, the spectre of Canadianization haunted the new commanding officer. On St Patrick's Day, 1943, Foster had found time to draft a long letter to Wing Commander D.S. Patterson at District Headquarters in Cairo.

As the only Canadian Unit in the Middle East this squadron operates under difficulties which do not confront squadrons in the UK and stations in Canada. The rapid expansion of the number of Squadrons in the UK and Stations in Canada have provided opportunities for rapid promotion for deserving airmen. Their contemporaries in this Squadron however, have no such opportunities no matter how skilled and how deserving. It is scarcely exaggeration to say that some of our better men would have already received accelerated promotion to fill establishment vacancies if they had been with RAF Squadrons. This is true not only with ground crew but also with aircrew. It is noted, for example, in the most recent RCAF list of Squadrons, that two pilots of 416 Squadron, our contemporary Fighter Squadron, have been promoted to Flight Commanders in other Canadian Squadrons, an opportunity not available to our equally senior and experienced officers.⁶⁸

The comparison with 416 Squadron was ill-judged. No 417 may have had 'equally senior and experienced officers,' but they were not nearly as skilled and combat-experienced as their colleagues of 416. Initially flying convoy protection patrols off Scotland, just as 417 Squadron had done off the Egyptian and Libyan coasts, 416 had been posted to Fighter Command's No 11 Group in time to participate in the Dieppe raid, in which (as we have seen) it had claimed three enemy machines destroyed, one 'probable' and seven damaged, without loss to itself. Since then the squadron had been busy with sweeps, Rhubarbs, Circuses, and Ramrods over the English Channel and northern France, where the Luftwaffe sent the cream of its pilots and the latest models of Messerschmitt and Focke-Wulf. The squadron as a whole was a good deal more experienced than No 417, and its stars shone much more brightly. One of its flight commanders, Flight Lieutenant P.L.I. Archer, DFC, already had four victories to his credit.⁶⁹

Foster, however, recommended several of his pilots for promotion and posting 'to any vacancy which may exist,' and shortly afterwards ten pilots (only one of them non-commissioned) were posted, with at least two of them going to RAF squadrons in the theatre. Foster himself, and both his flight commanders, left the squadron in June and were eventually repatriated to Canada. Flying Officer R.L. Patterson was promoted to command one flight, and Flight Lieutenant A.U. Houle was posted in to take over the other.⁷⁰

Finding a replacement for the squadron commander sparked a flurry of sig-