

explosion as a result of his attack on a 6,000 ton M.V. off Terschelling. His port engine was put out of action by enemy fire however he returned and made a successful landing on one engine. P/O Cooper attacked a 3,000 ton vessel off Vlieland. The rear gunner saw two explosions after the attack. P/O Dann returned with nothing to report. Sgt. Moss scored a direct hit on a 7,000 ton tanker North of Terschelling. A large flash was seen from the centre of the target. As a result of anti-aircraft fire the undercarriage was rendered U[n]S[ervicable] but the pilot made a successful belly-landing on his return without suffering any casualties. S[quadron] L[eaders] Lewis [the A flight commander and only non-Canadian pilot involved in the operation] attacked an M.V. of 3-4,000 tons North of Terschelling [and] a large flash was observed followed by sparks and smoke issuing from the vessel.<sup>34</sup>

The squadron was credited with three ships 'damaged,' but post-war research revealed that only the *Braheholm* of 5676 tons was hit off the Dutch coast on 1 November.<sup>35</sup>

The fact that so many ships merely sustained damage, despite the claimed accuracy of the bombing, reinforced growing suspicions within the squadron that their 250-lb Semi-Armour Piercing (SAP) bombs might be defective. It was not so much the defectiveness, however, as the ineffectiveness of their ordnance that was the cause of their frustration. Originally designed for use against warships with protective plating, the SAP series included only a small proportion of actual explosive in comparison with the weight of metal casing required to penetrate armour plate, and its blast effect was therefore diminished. Some, dropped from masthead height, did not explode at all, because they were not in the air long enough for the wind-driven vane which activated the fuse to arm the bomb fully. Instead, they simply penetrated the deck, sometimes exiting through the hull and leaving behind an easily plugged hole.<sup>36</sup>

No 407 Squadron was condemned to use SAP bombs until late May 1942, when they were finally replaced by 100-lb anti-submarine bombs and 250-lb general purpose bombs. The problem with fusing, however, was not discovered until September 1942, and then only through reports from Swedish sailors on the Rotterdam route. 'A very great number of our bombs fail to explode. One ship arriving in Cuxhaven had a dud bomb sticking out of its side and its presence was unknown to the crew until shoremen pointed it out to them. On many occasions duds are picked up by members of ship's crews and thrown overboard. German sailors have been heard repeatedly to say that the cause of so many of our bombs not exploding is the low height at which they are dropped, and probably bad setting of the fuses.'<sup>37</sup>

The threat posed by air strikes and offensive forays by the Royal Navy's motor torpedo boats (MTBs) had forced the enemy to adopt a convoy system by January 1941, particularly in those areas vulnerable to air attack. These convoys were initially guarded by armed trawlers, but as shipping losses mounted over the summer of 1941 the number of Flak ships assigned to them had to be increased until, by the end of winter, they often outnumbered the vessels being escorted. The most common escorts carried three or four batteries of quadruple 20-millimetre cannon, while larger ones mounted up to ten

batteries, some composed of 37-millimetre guns. The merchant ships themselves were also armed, usually with a 20-millimetre cannon forward and one on each wing of the bridge, and attackers often had to contend as well with the land-based Flak found along the Dutch coast and in the Frisian Islands. By September 1942 Northwood estimated that there were eighty-four heavy and 139 light batteries between Borkum and the Hook of Holland.<sup>38</sup>

Twenty-eight attacks by 407 Squadron during September and October resulted in the loss of one machine, which failed to return from a Hoden patrol on 10 October. November, which saw the squadron involved in twenty-four of the thirty-six attacks recorded by No 16 Group, also brought the loss of only one aircraft. However, the increasing weight and effectiveness of the enemy's Flak became apparent the following month when, despite bad weather that limited the squadron to only seven attacks, four machines were lost. Flying at night, often in miserable weather conditions, station-keeping within a formation of aircraft could be extraordinarily difficult, even when the pilots resorted to the dangerous practice of switching on their navigation lights (thus increasing the risk of enemy fighter interception). A coordinated night attack by several aircraft, therefore, was virtually impossible.<sup>39</sup>

While night attacks undoubtedly improved the immediate prospects of survival for strike squadrons, the policy also created problems of its own. Winter weather in the North Sea was only predictable to the extent that it was rarely good for flying, and often only marginally so. Moreover, it could change from bad to worse with a frightening rapidity quite beyond the capacity of meteorologists to predict, putting crews under considerable stress just by being in the air. 'Night after night we took off into the pitch black and, buffeted by rain, sleet and turbulence, flew along the German and Dutch coasts, groping through the murk for ships that became scarcer and more difficult to locate as the weather deteriorated... You got off on your own, flew to the enemy coast using elementary navigation and primitive radar to locate targets and determine landfalls. When you returned to base it was up to you to get down, and on misty mornings with limited visibility it could be challenging.'<sup>40</sup>

Since most aircraft patrolled alone, it was not always possible to determine the circumstances in which those that did not return met their fate. While the machines lost on 5 November and 1 December were certainly brought down by shipborne fire, one that failed to return from a Rover on 22 December was most likely shot down by coastal batteries. The fate of the other two crews missing in December is uncertain; they could just as easily have fallen victims to weather or accident as have been intercepted by enemy fighters or shot down by anti-aircraft fire.<sup>41</sup>

The strain of operations was reflected by an increase in the incidence of flying accidents unconnected with the weather. On 11 December a Hudson returning from a Rover patrol with a faulty radio mistook a guide beacon for a flare path light and made a crash landing in a nearby beet field. In his squadron commander's view: 'this pilot, who has carried out a fair number of night operational trips, has flown through some very dirty weather and carried

out his attacks on shipping with marked success ... Recently he has shown signs of strain, marked by lack of confidence in his blind flying ability. This caused him to hurry onto the ground as soon as he saw a flare path. He is being sent on a Blind Landing Course, it is hoped that this will enable him to regain confidence in himself on instruments.<sup>42</sup> The individual concerned subsequently completed a second operational tour before being repatriated to Canada in September 1944.

Another Hudson was damaged in early January when an undercarriage leg snapped after a heavy landing in a cross wind. Two weeks later the same pilot, returning from an operation, stalled his aircraft while attempting to abort a landing. The crash killed all five airmen aboard while thirteen groundcrew, attempting to rescue them, died when the bombload exploded. Bad landings during the next four weeks seriously damaged two more machines, and another fatal accident occurred on 17 February when an aircraft crashed on takeoff, killing all on board. Although the crash was attributed to mechanical failure, the loss of two crews in flying accidents within a month could be ill-afforded by a squadron which was already suffering heavy casualties on operations.<sup>43</sup>

During the war, service mail was routinely censored, not only for breaches of security, but also for assessments of morale on stations and within units. Such a report on North Coates, in late January 1942, singled out No 407 Squadron, whose personnel appeared 'to be suffering from strain and exhaustion after a long period of continuous operational flying.' An unattributable hand minuted that there 'was no foundation for the assertion,' pointing out that the 'average monthly flying time for aircrew [was] 15 [hours].' Although that was true, such statistical averages did not allow for the fact that bad weather could wash-out flying for days at a time and thus confine a month's operational flying to the space of a week or ten days, or that some crews might fly more often than others. 'So far this month it's been sleep all day and get up in time to fly all night again,' wrote Pilot Officer C.F. Race on 8 January, after having flown operationally on seven of the previous nine nights and eleven of the previous seventeen. 'I really think we must be the only squadron in England that flies every night without rest.' A sergeant in his crew noted, 'I have just heard that we are going out again tonight.' 'They must think we are a lot of machines,' he went on, showing more than a trace of paranoia, 'or maybe it is because we are Canadians. They certainly don't send the English squadrons out every night. I know that from talking to the boys of the other squadrons.' Another sergeant, D.A. Ross of Sherbrooke, Quebec, reported that 'we [407 Squadron] have been out 9 successive nights [2 to 10 January, during which Ross flew on five successive nights, the 4th to the 8th] ... I was so tired I didn't know what I was doing.'<sup>44</sup>

The anxious hours aircrew spent in the dispersal hut waiting for a Rover patrol to return, with the possibility of being dispatched to attack a reported convoy looming in their minds, also played a stressful part in their lives. 'For every operation we undertook,' one No 407 veteran recalled, 'it seemed that we stood by a dozen times, and the uncertainty of waiting was often far worse than the real thing.' 'We were always waiting to go out,' observed another,

'and it didn't pay to have too much imagination while you were sitting in a hut, nerves tightening and just waiting for orders to attack a well defended convoy. It was the most difficult part of shipping strikes.'<sup>45</sup>

An actual attack may well have been less stressful than the long wait that preceded it. On the night of 28 December, Styles led ten Hudsons on an anti-shiping strike. Three located the convoy and made attacks.<sup>46</sup>

When finally we were ordered to attack, it was a different story. After the engines fired and jumped into life, all the uncertainties disappeared. Suddenly, we were part of the action and absorbed in preparation and flying. The hundred and one little things that had to be done blotted out those tormenting uncertainties.

It turned out to be a difficult trip. About an hour and a half after taking off, blips of the ships appeared on the radar screen. They were strung out at about three miles distance and there were a lot of them. Then we could see the convoy, steaming line astern in ... two [columns] with flakships interspersed under a clear, but dark evening sky.

Almost before we had time to consider its composition or pin-point the location of the escort vessels, very heavy flak opened up at the front of the convoy, followed by the bright red flash of a bomb exploding.

'Christ! We're not the first in.' All my plans were out the window.

We turned and for a moment flew parallel to the line of ships, still hugging the water. Then we saw a large vessel near the rear which was not flying a balloon and appeared to be guarded by a single flakship. It was a good target and the light was right. 'Perhaps these buggers are preoccupied with the action up front.'

At maximum speed, with bombs readied and doors open, we skidded into position. The approach seemed to take forever and we sweated and waited. The first little indications of flak were the little coloured blobs of light that seemed to hang motionless in front of you before flashing past. It was a powerful wall of fire and we were not going to sneak in.

Then we were firing back and the smoke from the front Brownings filled the compartment – the designers had forgotten about ventilation – but we didn't give a damn; better to gag on the smoke and have them keep their heads down. We went in very low and released our bombs just before pulling up over the stern of the vessel. Then back down on the water, skidding from side to side to avoid the flak.

The machine-gun and cannon fire intensified as we flew out, and Ken Wallis fired back at everything that came into his sights, but an explosion was not observed on the ship and we couldn't believe it. It is not easy to miss from fifty feet under what had to be ideal conditions, and she was a big one too, about 7,000 tons.

After it was over, I experienced the usual excitement and relief, and then settled down for the flight home. It was a pleasant night, no night fighters, and everything seemed to be in order. After landing and debriefing, I didn't give it another thought until the next time. The real stress had been the waiting, not the operation.<sup>47</sup>

There is good evidence that more rest was needed, not only from operations but also from the living conditions at North Coates. 'Oh, what a desolate, miserable spot it is,' wrote one flying officer, 'no township within 14 miles.



Our sleeping quarters are 4 or 500 yards from the mess and it's most unpleasant facing the elements about 11 p.m. ... There is no fire in the room [and, of course, no central heating], so I flop into bed and shiver myself to sleep.' A new arrival reported that he was 'on the worst and dirtiest camp in England but on one of the best squadrons in England, 407 ... The grub is poor, quarters worse, and [I have] never been in so much dirt and filth in all my life.' It was not only Canadian aircrew who complained. The station 'was built during the last [1914-18] war as a summer training camp and is in a very dilapidated condition,' wrote a British aircraftsman employed on general duties. 'In fact, a farmer couldn't keep cows in these huts, water pours in the roofs and we have to bore holes in the floor to let the water out.'<sup>48</sup>

No 407 Squadron's losses continued to mount in January and early February. An all-RAF crew failed to return from a Rover patrol on 31 January. Eight days later another Hudson was lost on a similar mission. However, the greatest single blow to morale occurred on 12 February in operations against the German battlecruisers *Scharnhorst* and *Gneisenau* and the heavy cruiser *Prinz Eugen* during their breakout from Brest and passage through the English Channel.<sup>49</sup>

The background to Operation Fuller has already been described in chapter 6 of this volume and need not be recounted again. Suffice it to say that inadequate reconnaissance arrangements went awry, a senior officer of Fighter Command failed to exercise his initiative, and the enemy warships, having left Brest shortly after nightfall on 11 February 1942, were north of Le Havre and closing quickly on the Strait of Dover before they were reported, only an hour before noon on the 12th.

The tardiness of this recognition forced a hurried reaction that seriously compromised the entire operation. Joubert urged the AOC of No 16 Group to launch a delaying attack with RAF Beauforts from Thorney Island 'even if only a portion of the forces were available and if necessary without fighter escort.' In the rush to attack the German ships while they were still within range, however, coordination between the various commands degenerated into chaos. An attack by the Beauforts was ordered shortly after noon. Incredibly, the first four to arrive over Manston (at 1400 hours) were left circling the airfield, waiting for a fighter escort that had already been dispatched to the scene of action because No 16 Group headquarters had relayed the change of plans to the Beauforts by Morse radio message, forgetting that the torpedo-bombers had had their W/T continuous wave radios removed two weeks earlier in order to install new R/T voice communications. Only after landing at Manston were the Beaufort crews informed of their target and sent off to make their attacks individually and without escort, as best they could. The main Coastal Command effort, meanwhile, was to be delivered by nine more Beauforts, with Hudsons from 407 and 500 Squadrons making diversionary bombing runs at 5000 feet in order to draw the Flak away from the much lower-flying torpedo-bombers.<sup>50</sup>

No 407, having received a 'report of 25 to 30 ships ... including 3 battle-ships' at noon, was ordered to launch every available aircraft. Eight crews took

off, to meet with the Beauforts and three RAF Hudsons over Manston. Although the rendezvous was successful, they had been informed that a fighter escort would join up with them over Manston. When no fighters appeared the Beauforts attempted to lead the strike force out to sea, but the Hudsons, unable to communicate with them directly, failed to follow; Beauforts and Hudsons then aimlessly circled the airfield until, at 1530 hours, the Beaufort leader 'decided to go alone and set course for an estimated interception point based on his 1330 hour position for the enemy.' This time Squadron Leader W.A. Anderson, with four other No 407 crews and one of the RAF Hudsons, followed the torpedo-bombers, only to lose contact with them in the rain and low cloud. The remaining Hudsons returned to base.<sup>51</sup>

On reaching the target area two of the Canadian crews decided to drop their bombs without breaking through the cloud base, a wholly counter-productive exercise given the purpose of their mission (an unseen and unheard diversion was no diversion at all), while a third vainly attacked a German destroyer discovered entirely by chance. Anderson and Flying Officer L. Cowperthwaite were last seen launching an attack against one of the battlecruisers. Seven of the nine Beauforts launched their torpedoes, all to no effect; and all of them returned safely to base.<sup>52</sup>

The final effort to sink or damage the enemy ships came at last light as the flotilla was north of The Hague, off the Dutch coast. Twelve Beauforts, dispatched from Thorney Island, reached the vicinity of the German ships but were unable either to maintain formation or to locate their targets in a heavy rainstorm that had reduced visibility to half a mile. Two of them failed to return, 'but whether from Flak or flying into the sea in the prevailing conditions was never established.' The Germans reached safety in the Heligoland Bight by dawn on 13 February.<sup>53</sup>

Coming only two months after the British battleships *Prince of Wales* and *Repulse* had been sunk by Japanese air attack off Malaya, the successful passage of three major enemy warships through the Strait of Dover was a terrible affront to British pride. A parliamentary furore led the Cabinet to establish a board of enquiry which concluded that, 'apart from the weakness of our forces, the main reason for our failure to do more damage to the enemy was the fact that his presence was not detected earlier and this was due to a breakdown of night patrols and the omission to send out strong morning reconnaissance. All operational orders said they [the German ships] would pass through [the Strait of Dover] in darkness.'<sup>54</sup> Flight Lieutenant Gerald Kidd, in peacetime a London lawyer but now an air controller who had been intimately involved in some of the blunders that beset Fuller, was more specific. 'The fact remains,' he observed in a report submitted to Fighter Command, 'that upon them [Coastal Command] greatly depended the chance of obtaining early warning of the departure of the ships and also of an early attack upon them being executed ... Coastal Command, charged with the responsibility of keeping guard, let the Germans go and bungled the subsequent attack.'<sup>55</sup>

For his part, Joubert preferred to lay the blame on the 'inadequate resources' allocated to his anti-shipping forces, asserting angrily that 'if the Air Ministry

in its wisdom deprives this Command of the tools necessary to its work, that work will be badly done.' The AOC-in-C could, with considerable justification, point to the fact that he had had only three understrength Beaufort squadrons available for use against the German ships, and that they were serving more as OTUs for Mediterranean torpedo squadrons than as anti-shipping units with operational responsibilities in home waters. Indeed, one of them, after spending the month of October 1941 on torpedo training, had been forced to revert to minelaying at the end of November, after eleven of its most experienced crews were posted to the Middle East, while the other two had been unable to practise with any regularity because of a chronic shortage of torpedoes. (Fewer than thirty were allocated to Coastal Command each month, for both operational and training needs.) Nevertheless, Joubert could not dodge his command's responsibility for having failed to report the enemy movement earlier; nor had it made the best possible use of its resources.<sup>56</sup>

The loss of nine crews in only two-and-a-half months of operations had left No 407 with a grave shortage of experienced flyers, and on 14 February 'No 16 Group ordered the squadron to be taken off operations for a period in order to reform and for training purposes.' Two weeks later a scarcity of replacement aircraft led Northwood to prohibit all offensive operations against merchant shipping. Although the order was rescinded six weeks later, after Joubert had received Air Ministry assurances that twenty-six more Hudsons would be available by the end of April, the importance of giving 'due consideration ... to the necessity for conserving aircraft' continued to be emphasized.<sup>57</sup>

This brief suspension of operations allowed the squadron to complete the changeover in crew composition begun the previous November. As second pilots qualified to become captains of their own crews they were replaced by observers, so that by the end of March all crews consisted of a pilot, an observer, and two WOAGs. The restructuring of crews happened to coincide with a request that the squadron post all pilots in excess of establishment to other Hudson-equipped squadrons – thereby providing No 407 with an excellent opportunity to further the goal of Canadianization. The units concerned were instructed by Northwood to 'agree [on] the names of the pilots to be posted, bearing in mind that 407 Squadron is primarily to retain its strongest pilots, but at the same time releasing as many non-Canadian pilots as possible.' As part of the process, the training group was to post twenty-one observers from GR schools to No 407, 'selecting Canadians so far as resources permit.'<sup>58</sup>

In practice, the posting scheme soon grew to include all aircrew trades as the Canadian squadron's RAF aircrew were simply exchanged for RCAF aircrew from the other squadrons in the group. On 9 February, for example, No 407 received four Canadian WOAGs from one RAF squadron while posting three non-Canadian observers to another. Six days later, 'six RAF and Newfoundland WOAGs were posted to No 59 Squadron in exchange for six Canadian WOAGs from the same squadron.' By 18 March No 407 had taken in eleven RCAF pilots, sixteen observers, and forty-four WOAGs while posting out all but two of its RAF aircrew. (Of the remaining RAF officers, one was the commanding

officer, Wing Commander A.C. Brown, DFC, who hailed from Winnipeg.) By these means the Canadian content of the squadron's aircrew improved from 51 per cent in mid-January to 98 per cent by the time the squadron had completed its retraining period at the end of March. Among groundcrew, who were not involved in the posting scheme, the improvement over the same period was less dramatic, the figures being 32 per cent in January and 63 per cent by early April. This degree of Canadianization was only made possible because Joubert chose to ignore the standard Air Ministry argument against breaking up crews – namely, that such a course would imperil their safety and general operational efficiency. His actions may have been influenced by a letter from the air member for personnel, Air Marshal Sir Philip Babington. Pointing to growing pressure from the RCAF, the AMP had urged Joubert to pursue 'dominionization' with greater vigour.<sup>59</sup>

In his reply, Joubert had lamely maintained that 'so far as resources permitted, Dominion personnel were selected' in the formation of dominion squadrons, the fact that RAF aircrew had been posted in being taken as *prima facie* evidence 'that at the time Dominion personnel were not available.' Ignoring the shortage of serviceable aircraft and the inability of Northwood's inadequate training organization to provide sufficient aircrew for newly formed squadrons, he asserted that 'the formation of th[ese] Squadron[s] was considerably delayed in waiting for the [dominion] personnel to be posted.' He then pointed to 407 Squadron as an example of 'transferring Canadian personnel ... from Command resources,' but wrongly declared that it was 'almost completely Canadianised' in mid-February 1942. Finally, he attempted to deflect further criticism by suggesting that Canadianization was lagging simply because of a shortage of Canadian OTU graduates, but this argument also had a hollow ring, given the fact that Canadian aircrew had been kept waiting at No 3 Personnel Reception Centre for as long as fourteen weeks before commencing OTU training. Perhaps it was his own recognition of the weakness of this argument that led him to encourage the exchange of personnel in order to strengthen No 407's Canadian content.<sup>60</sup>

Ironically, at the same time that 407 Squadron was smoothly exchanging aircrew with its RAF counterparts, Babington was informing the new AO-in-C Overseas, Air Vice-Marshal Harold Edwards, that the Canadianization of RCAF Coastal squadrons was 'reasonably good with the exception of No 407 (Hudson) Squadron. There are 21 RCAF Hudson pilots in RAF squadrons, but without considerable breaking up of crews nothing further can be done at the moment.' In regard to observers, Edwards was assured that 'there is sufficient material in Coastal Command to rectify the position numerically, but as in the case of Bomber Command, it would mean the general breaking up of crews and this is even more undesirable within Coastal Command because, quite apart from the imperilling of operational efficiency and safety of crews which would be entailed by breaking up, certain squadrons have definite operational areas to cover and it would be quite futile to take crews who have the experience of the Norwegian Coast and transfer them, for example, to English Channel work as that would be wasteful of a great deal of most valuable local

knowledge. Similar consideration applies for other localities.<sup>61</sup> Babington either had deplorably little knowledge of Coastal Command deployments or was deliberately trying to deceive Edwards, since squadrons were frequently moved about to meet operational demands. And, given the relative ease with which No 407 Squadron 'Canadianized' its aircrew, Edwards's subsequent exasperation with Air Ministry fears of 'imperilling operational efficiency' may be viewed with some sympathy.

In contrast to the night operations being conducted by No 16 Group, the sorties flown off the Norwegian coast by No 18 Group were usually carried out in daylight, a circumstance imposed to some extent by the combination of longer distances from base and fewer hours of darkness during the northern summer. With Coastal Command's own Blenheim fighters easily outclassed by the enemy, however, an essential requirement for daylight operations was a sufficient degree of cloud cover to enable aircraft to elude the Me 109s and 110s which patrolled the Norwegian coastline. It was Northwood's policy, therefore, 'for the GR aircraft to fly at a low altitude over the North Sea to the Norwegian coast, and then, by taking full advantage of cloud cover, make a quick sweep into the fjords and if a target was found to carry out an attack.'<sup>62</sup>

Such sorties were conducted by two squadrons of Hudsons, one of Blenheim bombers, and one of Beaufort torpedo-bombers. No 404 Squadron's Blenheims became operational at the end of September 1941, flying out of Dyce, near Aberdeen, on the Scottish coast. Their duties were largely confined to convoy escort and reconnaissance patrols, but unlike 407 Squadron's operations off the Dutch coast they only reported shipping and were not required to make any attacks; that lack of direct contact with the enemy was reflected in the loss of only one crew as a result of enemy action during 1941. In fact, No 404's total of seventy-nine operational casualties during the entire war was seventeen fewer than the number incurred by 407 Squadron up to the end of May 1942.<sup>63</sup>

Nevertheless, life was not easy. Plagued by quickly-moving fronts, the Canadians often found inclement weather to be as great a danger as the enemy.

When the clouds were low and rain and sleet reduced visibility to only hundreds of yards you had to balance the importance of the job against the fact that it was now getting dangerous to fly; and you went deeper and deeper into the murk hoping that it *might* get better if you carried on just that little bit further. You often ended up squeezed into a couple of hundred feet of airspace between the grey wispieness of the lowest part of the cloudbase and the heaving desolation of the North Sea below, which would smash you into scrap metal if you hit it. At this stage you usually took out the automatic pilot and flew manually, and then the strain started in earnest. If you once lost sight of the sea in a wisp of cloud then you had immediately to pull up into the overcast with no hope of getting down through it again, and you climbed, hoping to break out of it in due course and that it would eventually clear enough to give you a safe landing back home. The belt of Scottish hills that lay inland at varying distances from the coast made flying low when lost in cloud a dodgy business ... We had no instrument landing system for the all-important final approach and touchdown, and it

was at this stage of the flight, when so near home, that many aircraft and crews met their end.<sup>64</sup>

One such accident occurred on 19 October 1941 when a Blenheim returning from a convoy escort failed to locate the airfield at Dyce, even though people on the ground could clearly see the aircraft's navigational lights through the mist. After flying to and fro for two hours looking for a break in the weather, it eventually crashed into the sea, killing all on board.<sup>65</sup>

These adverse flying conditions were particularly prevalent in the Shetland Islands, to which the squadron moved in late October. It was not unusual during the winter months for 'high winds, rain, snow and poor visibility' to restrict 'flying to a minimum.' Despite these handicaps, the Canadians were credited with their first enemy aircraft destroyed on 18 December when a Junkers 88 on a weather reconnaissance was successfully intercepted fifty miles east of the Shetlands by the squadron commander, an Edmontonian in the RAF, Wing Commander P.H. Woodruff. This initial success was followed by claims of one Me 109 'probable' and one 'possible' during No 404's participation in the commando raid on Vaagso, Norway, on 27 December, the largest and most successful such operation to date; one Heinkel 111 'probable' and one He 115 'possible' when they were intercepted off the Norwegian coast on 15 January; and one Ju 88 and one He 111 'damaged' on 7 and 9 February, respectively.<sup>66</sup>

As we have already noted, however, the vastly superior performance of German fighters generally placed the Blenheims at a severe disadvantage whenever they came into contact with such machines. No 404's increasing discontent was brought to the attention of Overseas Headquarters in April 1942 when Woodruff wrote directly to Air Commodore W.A. Curtis, Edwards's deputy:

Our Blenheims are getting rather old and, as you will realise, rather out of date. I am told that there are no Beaufighters to spare but have been given to believe that Mosquitoes are coming out fairly quickly now, and I feel that the Mosquito Fighter would be considerably better for our job than the Beaufighter because of its superior manoeuvrability. My boys have done their best with the Blenheims and I feel that they are reaching the stage where they feel they should be supplied with more modern tools, i.e. Mosquitoes. If you could possibly do anything to hurry up our re-equipping I would indeed be very grateful.<sup>67</sup>

Woodruff then turned to the issue of Canadianization, which:

seems to have created a small amount of prejudicial feeling in some quarters and while we have released all our English crews, we have had no replacements. We are now in a very good position at the moment to get new crews right up to scratch for operations as we have plenty of time for training flying. We had three Canadian crews posted to us but unfortunately they were posted away as soon as they got here. While I realize the fact that Squadrons who are doing more work than we are probably require crews more urgently, my aim is to get the Squadron up to strength while we have this chance



and then when we are called on for strenuous operations again we will be in a good position. We are at the moment seven crews under strength.<sup>68</sup>

De Havilland Mosquitoes – the ‘wooden wonders’ that could outpace Me 109s and carried four 20-millimetre cannon – were, of course, out of the question for Coastal Command in 1942; and Curtis’s staff could only recommend that Northwood be asked to re-equip the unit with Beaufighters, ‘pointing out the squadron’s record, and requesting that they be considered for re-equipping, if they have not already been considered.’ In the end, however, Curtis repeated to Woodruff Air Ministry declarations that the matter was under review and ‘that a high priority rating has been given to your Squadron for its conversion to Beaufighters.’ ‘High priority’ turned out to entail a four-month wait.<sup>69</sup>

As for his concern over Canadianization, Woodruff was assured that ‘this situation will be remedied very shortly,’ but here, too, progress was slow. The proportion of Canadian aircrew had remained at about 45 per cent since the squadron had commenced operations in September, and it did not rise consistently above 50 per cent for another year. Given the fact that the proportion in the other RCAF strike squadrons exceeded 90 per cent by April 1942, there may have been some truth in Woodruff’s contention of ‘prejudicial feeling,’ though the cause of such feeling and the quarters in which it existed remain obscure.<sup>70</sup>

Meanwhile, No 407 Squadron had resumed operations from Bircham Newton, on the English east coast just south of The Wash, at the beginning of April 1942. Of the squadron’s ninety-seven aircrew, sixty-four were recent additions, although many had previous experience with RAF Hudsons. They flew daylight reconnaissance patrols off the Danish coast and night-time Nomads (essentially Rovers under a different name) along the Dutch coast. With the prohibition on anti-shipping strikes still in effect, any vessels that were sighted could only be reported, not attacked, but even so two aircraft failed to return on 5 and 6 April, possibly having fallen victim to the Junkers 88 long-range fighters that guarded the Danish coast. The loss of two crews in two days once again demonstrated the vulnerability of the Hudson, and daylight sorties were quickly cancelled; operations were then confined to carrying out Nomad and anti-E-boat Hoden patrols. Although Nomads were meant to be flown simultaneously by three to four aircraft, each with its own section of the Dutch coast to cover, there was little difference between Nomad patrols and the irregular Rovers the squadron had conducted from its old base at North Coates.<sup>71</sup>

Operations were further curtailed by a shortage of serviceable aircraft. After the loss on 6 April, only two machines were available until replacements could be gleaned from other squadrons. Four arrived by 12 April, but ‘all [had] seen considerable service’ and were in such poor condition that ‘the maintenance section had to work overtime to bring them up to operational standard.’<sup>72</sup> One squadron veteran recalled looking ‘over a couple of replacement aircraft that had been flown in ... There was none of that exhilaration and good feeling that

had been there months, or was it years, before, when D.A. [Ross] and I had examined our first Hudson. The aircraft I climbed into was old and at the end of its service life. It flashed through my mind that someone was unloading these old crates on 407 because they wouldn't last long anyway.<sup>73</sup>

The lifting of the prohibition on anti-shipping strikes, together with a resumption of the normal convoy cycle off the Dutch coast with the coming of spring, allowed a greater number of attacks to be made during April. The Canadians managed only four of them, three with unobserved results, and lost two more crews. However, the increasing amount of traffic between the Elbe and Rotterdam convinced Northwood to initiate an all-out effort in early May and No 407 made fourteen attacks during the first week of that month, with only one pilot being wounded by Flak. The strikes were made either in moonlight or at twilight, using the same low-level tactics adopted the previous summer. On the night of 3/4 May, Flight Sergeant E.L. Howey's crew sank the 4647-ton *Sizilien* and four nights later eight machines attacked a convoy off Vlieland, sinking the *Ruth* (3726 tons) and damaging the 2860-ton *Namdo*. A week of bad weather prevented any further sorties until mid-month.<sup>74</sup>

In the early evening of 15 May, reports of a convoy off the Frisian Islands prompted group headquarters to launch two strike forces. One, led by Pilot Officer F.A. Kay of 407 Squadron, consisted of three RCAF Hudsons and eight from No 320 Squadron. They attacked through intense Flak, losing two Hudsons, one from each squadron, while a severely wounded Kay eventually crash-landed his damaged machine at Bircham Newton, killing his observer and injuring the two gunners. The second formation of nine machines, all from 407 Squadron and led by Flight Lieutenant R.M. Christie, launched its follow-up attack on a fully alerted enemy. Three were shot down in the vicinity of the convoy, while a badly damaged fourth crashed at Coningsby, a bomber base nearly fifty miles from Bircham Newton, killing all on board. In Christie's case, all his instruments 'were entirely shot away and his undercarriage failed to function,' compelling him to crash-land, though successfully, at Bircham Newton. In all, the strike cost the squadron twenty-two aircrew killed or missing, and four wounded or injured. Two ships were sunk, the Norwegian *Selje* of 6698 tons and the 464-ton *Madelein Louise*; for his part in the action, Christie was awarded a Distinguished Service Order, a decoration normally reserved for more senior officers and, when given to a junior one, considered second only to the VC.<sup>75</sup>

Once more No 407 was left with only two serviceable aircraft and had to be taken off operations for two weeks until replacement aircraft could be flown in from other units. Operations resumed on 28/29 May when eight machines participated in a strike that resulted in two claims. One of them 'came across an enemy ship on fire ... in tow by another MV' which was in the process of picking up survivors. 'Without more ado P/O [L.J.] O'Connell made an attack dropping his bombs over the two ships and causing large explosions. His rear gunner ... machine-gunned the ships and caused considerable damage and consternation among the enemy.' Meanwhile, Sergeant M.A. Tisdale's attack produced 'a bright yellow flash' and 'dense smoke.'

Another major strike the following night, which included eight aircraft from the Canadian squadron, sank the Swedish ship *Varmdo* of 2956 tons. Flight Sergeant Howey and Pilot Officer O'Connell both claimed hits, the latter going in so low 'that he struck a mast,' and both Hudsons were damaged. Six crews failed to return, one of them from No 407, flown by Flying Officer C.F. Race, whose views on the squadron's workload have been quoted earlier in this chapter. His Hudson was disabled by Flak while diving on the convoy and crashed nearby, the aircraft exploding on impact with the sea. Two of the crew, Flight Sergeant J.F. Clarke and Sergeant W.P. McCarthy, were picked out of the water by the enemy, but the latter died of his injuries before the convoy reached Borkum. Clarke survived, becoming a prisoner of war in Stalag VIII B.<sup>76</sup>

These losses prompted the squadron diarist to observe that 'during the past month six crews have either been designated missing or killed on operations with a loss of twenty-seven lives. This does not take into consideration the fact that after every major operation of this nature at least two or three aircraft are so very badly damaged they are of no use to this or any other squadron.' The casualty rate was not unique. Altogether, Northwood lost forty-seven aircraft on anti-shipping operations in April and May, as the overall loss rate during the latter month rose to 23 per cent of attacking aircraft, a figure approaching that which had forced Bomber Command's No 2 Group to abandon its anti-shipping activities the previous November.<sup>77</sup>

Even when conducted under cover of darkness, low-level attacks were costing almost 20 per cent of the aircraft involved. At a meeting of squadron, group, and command representatives held on 21 May 1942, 'the operational squadrons felt that the casualties recently incurred were due as much to tactics as to shortcomings in the aircraft engaged in the operations. The two weaknesses were that the enemy [presumably through their radar coverage] ... were able to warn the convoys, and that the defences had become accustomed to low level attacks and shaped their action accordingly.' The AOC-in-C, who chaired the meeting, agreed 'that tactics must be varied even at the expense of accuracy' but seemed in no hurry to investigate alternatives. In early June No 16 Group applied for permission to withdraw the Hudson squadrons from anti-shipping operations in order to train them in medium-level attacks from 4000 feet. Joubert agreed to the proposal as an interim measure, pending further consideration of the problem, but not until 1 July did he finally rule 'that mast height attacks against escorted convoys, by day or by night, were at present out of the question.'<sup>78</sup>

The enemy was suffering, too, from air, surface, and submarine attacks, as the total amount of German-controlled tonnage available for commerce declined by 10 per cent, from 1,050,000 tons in July 1941 to 946,000 tons in June 1942. Imports of Swedish iron ore were only 8.6 million tons, or 14 per cent behind schedule. With steel production already stretched to meet the expanding needs of the Wehrmacht, a large-scale shipbuilding program in Germany to replace lost tonnage was not feasible, and any improvement in the situation would require a drastic rationalization of existing resources. In May 1942, therefore, Hitler appointed the Gauleiter of Hamburg, Karl Kaufmann,

as Reichskommissar für Schifffahrt with wide administrative powers over merchant shipping and shipbuilding. He moved immediately to raise freight rates, improve the pay and conditions of service of the merchant seamen, and return 300,000 tons of shipping specifically allocated to the Wehrmacht to the commercial pool. Then he attempted to ensure the 'complete utilisation of space in each ship; shorter turn around times by quicker dispatch from individual ports; expansion or rationalization of port facilities including transport services; provision of more port labour and the speeding up of voyage times by reducing the number of ports of call.' A modest construction scheme was also introduced, and 750,000 tons of standard design were scheduled to be delivered by the end of 1945.<sup>79</sup>

The anti-shipping campaign was clearly having some effect, but it had yet to realize its potential. The torpedo was by far the most effective weapon against ships at sea, but torpedoes were in short supply; and while the formation of Nos 415 and 489 (RNZAF) Squadrons in August 1941 had enabled Northwood to maintain six torpedo-bomber units in home waters, until December 1941 they were still flying obsolescent Bristol Beauforts. Moreover, they had not yet been brought up to operational standards when four older, more experienced squadrons were dispatched to the Mediterranean and Ceylon (where the Beaufort might still hold its own) to help combat the German intervention in North Africa and the Japanese threat in the Indian Ocean. In January 1942, however, the Air Ministry had finally allocated twenty-four Hampdens to Coastal Command, enough to re-equip No 415 Squadron and increase its establishment to twenty-two machines. Another unit was similarly re-equipped the following month, while a further two Hampden squadrons were transferred from Bomber Command in April 1942 as it converted to four-engined heavy bombers.<sup>80</sup> Joubert's torpedo-bomber strike force now had the range to reach Denmark. Yet it was not greater range that he needed as much as fast, well-armed, and agile torpedo carriers; in these respects the Hampden was no better than the Beaufort. An infusion of Beaufighters would have been far more useful.

The Hampden's deficiencies notwithstanding, No 415 Squadron's much-increased establishment permitted its crews to spend many more hours of flying training around their base at Thorney Island, but that may still not have been enough. Not entirely satisfied with what he saw on a visit made just before the unit was to move to St Eval in Cornwall, the RAF's inspector general concluded that the squadron would 'require to do a period of thoroughly intensive training when it gets to its new station' before it could be considered 'operationally efficient.' Nevertheless, over the next two months its torpedo-bombing training schedule was continually interrupted by a series of essentially unrelated operational tasks and yet another move. Anti-submarine patrols with depth charges were conducted over the Bay of Biscay to no avail; Rover patrols with torpedoes were flown over the southern reaches of the North Sea after the squadron's return to Thorney Island in May; and crews were introduced to anti-shipping strikes employing the new B (for Buoyant) bomb.<sup>81</sup> As useful as each of these kinds of attack may have been, however, they all

demanded different skills in the handling of aircraft and weapons-systems; regrettably, No 415 was given no opportunity to master even one of them.

The B-bomb represented another technological advance. Really more of a mine than anything else, and designed to be dropped in the immediate path of a convoy, it would float up and detonate on contact with a ship's hull. As a result, B-bombs did not have to be dropped as accurately as conventional bombs, but to be effective they had to be planted in quantity, and virtually simultaneously, from a tight formation of aircraft.<sup>82</sup>

In early June 1942, in yet another attempt to develop new tactical procedures, a number of strike squadrons were grouped together on the east coast for joint exercises. A portion of No 415's training was carried out in conjunction with 59 Squadron, which flew Hudsons equipped with ASV radar and a stock of parachute flares, and combined patrols were generally flown in formations of three aircraft, consisting of one radar- and flare-equipped Hudson to locate and illuminate the target and two torpedo-carrying Hampdens to attack it. Despite the fact that torpedo training could only be carried out by small detachments sent in turn to the Torpedo Training Unit at Abbotsinch, the squadron pronounced itself 'one hundred per cent torpedo trained' by the beginning of July. Formation flying and 'high-level' (4000 feet) bombing were also practised, and once again the commanding officer reported that 'high level bombing training by day and by night has ... been very satisfactory and above average,' even while the squadron diarist admitted that 'to date crews have not been making good scores.'<sup>83</sup>

Another tactic was added to the squadron's repertoire on the night of 1/2 July, when a formation of four Hampdens armed with B-bombs took off from North Coates to attack a reported convoy, followed thirty minutes later by four torpedo-carrying Hampdens. If the bombers could disrupt the convoy's orderly progression, either by damaging or sinking ships or simply by compelling them to take evasive action and thus weaken the intensity of Flak patterns, then the torpedo-bombers should have a better chance of success – at least in theory. In practice, things were less certain, for although the strike force arrived in the vicinity of the target just after midnight, only one of four low-flying bombers was able to find the convoy and make an attack, while only two torpedo-bombers were able to launch their ordnance, one of them then falling to Flak. No ships were sunk or damaged.<sup>84</sup>

No 415 Squadron's experiments with B-bombs would continue, but only seven of the thirty B-bomb sorties flown during July resulted in 'attacks' – if that is the right word – and not one enjoyed any success. B-bombing required sufficient cloud cover for the Hampdens to evade night-fighters, but it was extremely difficult to maintain the requisite close formation while flying at night in cloud; moreover, cloud often obscured both the flares dropped by the Hudsons and the convoys themselves.<sup>85</sup>

A further tactical refinement was added on the night of 30/31 July for a strike flown by aircraft from Nos 59, 407, and 415 Squadrons. Rather than using a single radar-equipped Hudson to search for the enemy, several were sent out ahead of the bombers, the idea being that the successful crew, or

Rooster, would shadow the convoy while sending out a signal on which the strike force could home. When the others arrived, the Rooster would then illuminate the target and thus initiate an attack.<sup>86</sup> As described in the No 407 Squadron diary, the first use of these tactics, at the end of July, achieved a coordinated, multi-squadron – but still unsuccessful – strike.

It would appear that the scheme was most satisfactory and nearly all aircraft found the target and attacks were carried out on a large enemy convoy off Terschelling. The Wing Commander, when he was satisfied that the Squadrons had homed on his aircraft, climbed from deck level to 4000 feet, dropped a flare to light up the target and circling, dropped his bombs on an enemy ship causing at least two definite hits. The Wing Commander then headed for base. Arriving over the convoy shortly afterwards the remainder of our crews proceeded to drop flares and by the light of these dropped their bombs. Owing to the height which they were flying, 4000 feet, definite hits were not observed. Observation was further complicated by the fact that there was some smattering of clouds in the vicinity which partially obscured the ships. However, taking into consideration [that] nine of our aircraft dropped their bombs over the ships themselves it is pretty conclusive even that if direct hits were not made there were many near misses and the effect of bombing at such close range has proved to be extremely satisfactory. Unfortunately, it is not known what damage was caused, but there is little doubt that it must have been extensive. As this Squadron left the target area, No. 59 Squadron arrived and proceeded to adopt similar tactics. By the light of their flares No 415 Squadron appeared on the scene and dropped their torpedoes. It is evident that several more ships were hit.<sup>87</sup>

What was 'evident' to the squadron diarist (and to the squadron commander who signed the entries) was far from evident to the enemy. In fact, Coastal Command was unable to sink or damage a single enemy vessel in either July or August.<sup>88</sup>

While 407 Squadron continued to use the Rooster technique on anti-shipping strikes until transferred to St Eval (No 19 Group) in October 1942, 415 Squadron moved to Scotland in early August for two months of rest and training. The move was instigated by Joubert in a belated effort to concentrate his four torpedo-bomber units, 'with the object of permitting Squadron training and the studying of torpedo and "B" bomb tactics.' Stating the obvious, the AOC-in-C felt that there was 'much to be done in developing the ability of torpedo squadrons to reach their target and deliver an effective attack.' He went on to suggest fitting 'formation flying lights' on the Hampdens to aid in night flying, a recommendation that ignored the experience of his Hudson captains, who had already tried it and found it wanting. He understood the tactical difficulties sufficiently, however, to recognize that the necessity of operating at night made coordination with the Hudsons difficult and thought it 'doubtful whether long-distance combined attack would be successful but the problem should be examined to see if a solution is possible.'<sup>89</sup>

What was needed, if Coastal Command was to take on heavily defended convoys successfully in daylight, were composite strike wings of fast, manoeu-



vorable torpedo-bombers escorted by equally fast and manoeuvrable machines able to suppress the enemy's Flak with bombs and air-to-surface fire and at least challenge the enemy's fighters. Given the unlikelihood that Mosquitoes would be made available, Beaufighters were the answer, and Joubert already had the conventional long-range fighter version. At the end of July the Air Ministry allocated the first Beaufighters modified to carry torpedoes (known colloquially as Torbeaus) to No 254 Squadron, and in September it indicated that Joubert might have as many as five Torbeau and five Beaufighter squadrons by the spring of 1943.

The seeds of an effective composite wing had been planted. Both the Torbeau and Beaufighter were heavily armed (each carried four 20-millimetre cannon in the nose and six .303-machine guns in the wings); both had cruising speeds in the 200-240 miles per hour range, making it practicable for them to work with single-seat fighters, if necessary; they were relatively manoeuvrable and their maximum speed of 315 miles per hour afforded their crews some chance against enemy fighters. Not wanting to wait until the spring, Joubert decided in October to withdraw No 143 Squadron from its escort and reconnaissance duties and, co-locating it with No 254 at North Coates, in November formed an experimental composite strike wing of Beaufighters and Torbeaus.<sup>90</sup>

## A Force to Be Reckoned With, 1943–5

Believing that the interdiction of enemy convoys along the Dutch coast was of such importance that his composite wing of Torbeaus and Beaufighters should become operational as soon as possible, Air Chief Marshal Philip Joubert de la Ferté decided to commit his meagre force to an early operation there even though it had had only a short two weeks of joint preparation. With the torpedo squadron neither fully equipped nor trained, however, and only one squadron of Beaufighters being available for the anti-Flak role, the first strike flown by the North Coates wing, on 20 November 1942, was a disappointing affair marked by a number of tactical blunders. Sinking the Dutch tug *Indus*, of 449 tons, was small compensation for the loss of five aircraft.<sup>1</sup>

Bruised by the experience, the prototype composite wing went back into training while the group staff set about analysing what had gone wrong. They concluded, perhaps obviously enough, 'that co-ordination in attack had to be considered in terms of seconds ... Careful briefing, good leadership, a very high standard of air discipline and skill in attack, [and] close liaison with the fighter escort, were all essential qualities to be acquired before the composite force could hope for success.' Accordingly, No 16 Group added, it was 'essential that a Striking force of this nature should be located at one Aerodrome and trained as a team. The team to consist not only of Torpedo aircraft and [anti-Flak Beau]Fighter Bombers, but also of fighter escort, reconnaissance aircraft and photographic aircraft.'<sup>2</sup>

Still stationed in Scotland – once again at Dyce, on the east coast near Aberdeen – No 404 Squadron had begun to replace its Blenheims with Beaufighter IIFs in September 1942. Powered by Rolls Royce Merlin XX engines, adopted because of a shortage of the Bristol Hercules VI radials used on the Mark VI, the IIF was generally regarded as too slow to be a superior coastal fighter. Yet such was the requirement for long-range machines that at the end of January 1943 the squadron was transferred to Chivenor in southwest England, to provide fighter cover for No 19 Group's anti-submarine operations in the Bay of Biscay. Although the Luftwaffe's attacks on these patrols had diminished in number since autumn, Fliegerführer Atlantik maintained a limited number of Ju 88 long-range fighters on the French coast and there was

a resurgence of activity in March when 19 Group lost three crews while accounting for four of the enemy fighters.<sup>3</sup>

No 404 was responsible for two of the four victories when six of its Beaufighters intercepted seven Ju 88s. Three of the enemy 'started a steep climb, taking no other evasive action.'

A[ir]/C[raft] R [Flight Sergeant V.F. McCallan] maintaining an average climbing speed of 160 mph to 4,000 ft had closed within a range of 700 to 800 yards of one Ju 88 which had fallen behind the other two E[nemy]/A[ircraft]. The pilot of A/C R opened fire with cannon at this point from dead astern firing two 3 second bursts and two 4 second bursts at this E/A. From the last two bursts fired both pilot and navigator observed strikes on the port engine and port wing of the E/A. A shower of pieces were seen to be knocked off the port wing, also one portion about one foot square. A heavy cloud of black smoke poured from the port engine continuing until E/A was lost from view. At the time hits were observed the enemy A/C made a violent turn to port, losing altitude on the turn. A/C R attempted to turn inside the E/A and stalled. A/C T [Flight Sergeant H.R. Browne] then made an attack firing two one-second bursts with cannon from astern the Ju 88 at 500 and 300 yards. No hits were observed. The three E/A then gained cloud cover and were not again seen.<sup>4</sup>

The other four German machines were pursued by the remaining Beaufighters, but they were unable to overtake their adversaries. Just before the enemy escaped into cloud cover, Flying Officer R.A. Schoales fired four long bursts from a thousand yards at the Junkers furthest to port. Given the long ranges at which the Canadians had fired, the commanding officer, Wing Commander G.G. Truscott, assessed the engagement as 'inconclusive ... due to inability of Beaufighter Mk. IIF to overtake Ju 88's.' In fact, however, McCallan and Browne in the one case, and Schoales in the other, had managed to shoot down both of the Ju 88s they had fired upon.<sup>5</sup>

With No 404 Squadron still involved in escort work and No 407 transferred to anti-submarine duties in early 1943, the RCAF's only other anti-shipping unit was No 415 Squadron. After returning to No 16 Group in November 1942 it had resumed flying Rover patrols, although since its Hampdens needed favourable conditions of cloud and darkness to survive off the enemy coast, sorties were flown just two or three nights each month. From early November to the end of May 1943, its crews made only twenty attacks against enemy shipping while losing eleven aircraft.<sup>6</sup> The greatest danger remained the intense anti-aircraft fire, as the crew of Hampden F/415 discovered in the early morning hours of 23 December 1942.

Point of strike off the Dutch Coast was reached at 0005 hrs and two flares and flak from unseen ships were observed. At 0020 hrs several ships were seen and F/415 went in for an attack releasing torpedo from 30 to 40 feet at 800 yards. Results not observed due to violent evasive action. Intense and accurate light flak was experienced, three shells bursting within the interior of the fuselage rendering all of the pilot['s] flying instruments unserviceable except the directional gyro, the altimeter and the compass.

The elevator trim control was completely shot away and the aircraft zoomed up to 800 ft with the cockpit full of blinding smoke. Sgt Ellergodt successfully managed to bring [the] aircraft under control and flew it in its disabled condition back to base landing safely at 0324 hrs on 23/12/42. Sgt. Johnson received a small shell splinter in one thumb but the remainder of the crew were uninjured.<sup>7</sup>

Not surprisingly, perhaps, the torpedo missed its target on that occasion. It was not until almost four months later, on the night of 14/15 April 1943, that two crews were able to make a successful attack on a convoy north of Schiermonnikoog, in the Frisian Islands. Both scored hits, the first of which sank the Norwegian vessel *Borga* of 4821 tons while the second, failing to explode, only damaged the Swedish *Tom* of 2092 tons. One month later, a strike by eight machines on a convoy northwest of Borkum sank the German escort trawler *Ernst von Briesen* of 408 tons for the loss of two aircraft. Following a two-week training period in early June, the squadron spent the next two-and-a-half months flying Musketry patrols in the Bay of Biscay as part of Coastal Command's latest anti-submarine offensive.<sup>8</sup>

While Coastal Command headquarters, at Northwood, was preoccupied with the climactic phase of the Battle of the Atlantic in the spring of 1943, the anti-shiping campaign resumed in April with the return to operations of the Beaufighter strike wing at North Coates. The lessons learned from the disappointing attack of 20 November 1942 had been absorbed, and it was agreed that the cannon-armed fighters must take on the escorts to suppress Flak while 'the task of sinking the target ship was that of the torpedo bombers. If experience showed that target ships carried considerable Flak, a proportion of the fighter and UP diversion force would attack her.' 'UP' meant 'unrotated (or rocket) projectile,' and its consideration by the staffs at Northwood and in the groups early in 1943 reflected their eagerness to employ this new, experimental, weapon in the anti-shiping war. Just three months would elapse before they would be used operationally for the first time.<sup>9</sup>

The successful operation of the strike wing also required effective cooperation between Coastal and Fighter commands. The North Coates wing found it difficult to fly the frequent reconnaissances required as well as to carry out its training and strike functions, while a reconnoitering Beaufighter 'had little chance of survival if engaged by Me 109s or FW 190s which were at this time operating off this coastline.' An intercommand agreement was concluded whereby Fighter Command's No 12 Group (initially using Mustang fighters from Army Co-operation Command) would conduct reconnaissance flights, known as Lagoons, along the Dutch coast as far east as Wangerooge in the German Frisian Islands. Northwood would be responsible for its own reconnaissances east of that point.<sup>10</sup>

Increasingly, special intelligence – 'references in Enigma to navigational and other arrangements for convoy movements' – was revealing the enemy's routine, and from it and other sources (including aerial reconnaissance) Northwood knew which swept channels the convoys used, where they spent the night, when they entered and left harbour, and when and where they met their

escorts. It was therefore possible to discern when the Germans altered or abandoned their routine, and to deduce, often quite accurately, when especially important convoys were sailing. Intercepted Enigma signals also confirmed actual, rather than claimed, damage done and, more generally, the extent to which the anti-shipping campaign was having an impact on the enemy's ability to move essential supplies by sea.<sup>11</sup>

An opportunity to test the strike-wing tactics again came on 18 April when a convoy was reported off The Hague consisting of one large merchantman and seven smaller vessels escorted by four Flak-ships and four minesweepers. The strike force consisted of nine Torbeaus, twelve anti-Flak Beaufighters armed with cannon and two 250-lb general-purpose bombs, and a high cover of twenty-two long-range Spitfires and eight Mustangs from Fighter Command. Shortly before reaching the Dutch coast, the strike formation began to climb to the designated attack altitude. Locating the convoy, the twenty-one Beaufighters turned in unison. The anti-Flak sections, concentrating on the escort ships, made diving attacks from 1500 feet while the Torbeaus flew in steadily at 150 feet. The entire action lasted only four minutes and left four escorts damaged and the 5000-ton target, *Hoegh Carrier*, sinking. Only two of the attacking Beaufighters sustained light damage, indicating that the Flak defences had been overwhelmed and demonstrating the success that could be achieved by a well coordinated attack. The next two operations, on 29 April and 17 May, confirmed the value of the new tactics as six ships totalling 13,803 tons were sunk for the loss of only one Beaufighter.<sup>12</sup>

These losses – and those attributed to mines and light naval forces – had an immediate impact on Swedish willingness to trade at Rotterdam. During the summer of 1942, the average amount of active shipping tonnage there (excluding tankers and vessels under 1000 tons) had been 100,000 tons, while the comparable figure for the German port of Emden, beyond the range of the strike wing's fighter cover, was 39,000 tons. By May 1943, however, activity at Rotterdam had declined to the lowest levels yet observed, with only 37,000 tons of shipping in the port. Emden, in contrast, had witnessed an increase to a total of 90,000 tons at the end of May.<sup>13</sup>

Despite the strike wing's success – ten ships, totalling 24,222 tons, sank between 18 April and 31 July – the fact that attacks were carried out against only nine of fifty-five convoys sighted between the Elbe and the Hook of Holland during that period led the new AOC-in-C at Northwood to question whether the Beaufighters would not be better employed providing long-range fighter cover in the Bay of Biscay. Already short of fighter escorts for anti-submarine work in the bay and told 'there was likely to be increasing difficulty in finding sufficient fighter escorts for shipping strikes,' the AOC-in-C decided to ignore what had been achieved so far and asked that his Beaufighters be permitted to move south to cover the Biscay anti-U-boat patrols.<sup>14</sup>

Slessor's proposal to reinforce the bay offensive at the expense of the anti-shipping campaign was opposed by both the Admiralty and the Ministry of Economic Warfare – and in strong language. 'The attacks by Coastal Com-

mand's Strike Wing and the Nore Flotilla upon enemy shipping, the American daylight bombing, the night bombing and mine-laying of Bomber Command, and the action of the fighter escorts, were all complimentary and cumulative in their results. The effects of each one aggravated and increased those of the others; the cessation of any one might well go far to stultify the activities of the others by creating a loop-hole for escape.<sup>15</sup> These arguments were persuasive, and it was finally agreed that the North Coates wing would continue to operate on its present scale. For its part, Fighter Command guaranteed to provide three squadrons of escort fighters on all occasions except those when a major daylight bombing raid was scheduled.<sup>16</sup>

Although the Air Ministry had formerly proposed equipping ten Coastal squadrons with Beaufighters by the spring of 1943, there were still only seven in May and, of the four Hampden torpedo-bomber squadrons in the command, only No 144 was re-equipped with Torbeaus. The rest, all dominion squadrons, retained their Hampdens. Conducting operations with aircraft that were quite unsuitable for their role had an understandably debilitating effect on morale, a fact that had been obvious to Air Marshal H. Edwards during a visit to No 415 Squadron in September 1942. However, when he had asked that it be re-equipped with better aircraft, he had been informed that 'questions of this nature must ... be decided from the broad aspect and not with particular application.' The Air Ministry had promised only that the squadron would receive improved Hampdens and for the moment that seems to have satisfied Edwards, who was otherwise distracted by the pressures of forming a Canadian bomber group. The matter was not raised again until July 1943.<sup>17</sup>

Equipment was not the AOC-in-C's only concern. Prior to his visit to No 415, a large number of non-RCAF aircrew (in fact thirty-five of forty-two recent arrivals) had been posted in to the squadron, with the predictable result that its Canadianization rate, which had long stood at 90 per cent or better (and reached 95.6 per cent as recently as 26 August) fell to 65.7 per cent. That, Edwards complained, was 'not in accordance with the spirit of our agreement to post Canadian crews to Canadian squadrons.' A subsequent investigation undertaken by the AOC of No 17 Group confirmed his allegation, adding for good measure that the postings had been 'in direct contravention of both Command instructions and my own.' The group promised to do better in the future – and did so, if only slightly. In November the Air Ministry was able to report that 'a considerable improvement has been effected and today out of a total of 22 crews, 17 are Canadian. Every effort is being made to Canadianize the remaining 5 crews at the earliest opportunity.' However, a year later the percentage had not changed.<sup>18</sup>

Moreover, when a new commanding officer had to be found to replace Wing Commander W.W. Bean upon his repatriation to Canada, the officer proposed by Overseas Headquarters, an experienced Catalina pilot, was not considered suitable by Sir John Slessor because he had no torpedo-bomber experience. The AOC-in-C wanted, instead, 'to post Squadron Leader G.H.D. Evans [RAF] from No 489 Squadron to command No 415 Squadron. This officer has had considerable experience as a Flight Commander in No 489 Squadron, which



is a Hampden Torpedo Bomber Squadron.' As there were no equally qualified Canadian candidates immediately available, Edwards had to accept Slessor's man; but he took steps to insure that the situation would not be repeated. On 17 March he informed the Air Ministry that 'a signal has been sent to Air Force Headquarters in Ottawa to post Overseas a squadron leader or wing commander with the necessary background and on arrival he will be posted to Coastal Command for necessary OTU training, at the completion of which he will double bank Squadron Leader Evans and subsequently command No 415 Squadron.'<sup>19</sup>

Questions of national significance concerning No 415 Squadron would not go away, largely because of the perceived adverse effects of its odd-job employment and lack of satisfactory aircraft. In June 1943 Ottawa recommended that an RCAF composite group be formed to support the Canadian Army (see chapter 7); since No 415 seemed to be under-utilized in its present role, Overseas Headquarters raised the possibility of transferring the squadron to the proposed new composite formation. Responding to Edwards's calls to either re-equip or reassign the squadron, the Air Ministry's director general of organization assured him that, although it was to be 'regretted that, for operational reasons, the withdrawal of this efficient squadron from a most important and vital role cannot be contemplated at the present time and it is hoped you will not press us over this as the re-equipment of the Squadron is almost in sight and it would be both unsound and uneconomical to waste all the experience gained by the squadron in torpedo operations with the Metropolitan Air Force.'<sup>20</sup> Having received similarly fulsome assurances in the past, Edwards was not to be placated so easily this time. In a meeting with the air member for supply and organization, Sir Christopher Courtney, on 24 August, he presented his view that 415 Squadron 'should have first class Torpedo aircraft and not Hampdens or Wellingtons or any other kind of Bomber Command obsolete discards.'<sup>21</sup> This time the response came from Slessor.

It has been decided that 415 is to be re-equipped and employed on a new and much more active role. We have just had a thorough review of our commitments and resources, and amongst other things it became plain that we are over-insured in torpedo squadrons, of which we have 5 in Home Waters for which there really is not sufficient employment. On the other hand we have nothing to deal with the E and R boats [German MTBs and small escort vessels, respectively], which are a real menace to the increasingly important Channel and North Sea Convoys. We used to use Whitleys for reconnaissance and close co-operation with our own light coastal craft in the Nore area, and the Fleet Air Arm have been helping us out with Albacores for the strike action against the E and R boats in the Channel - in which, as you may have noticed, they have had some useful success. The Whitleys, of course, are dead and the FAA units are being withdrawn to work at sea.

It has, therefore, been decided to re-equip one squadron as a composite unit with one Flight of Wellington XIII with VHF and ASV III for work with light coastal forces, and one Flight of Albacores ... to beat up the E boat[s]. 415 was selected as it is the only torpedo squadron not included in a Strike Wing, and it knows the Channel and

the Dutch Coast well. Incidentally one of the other torpedo squadrons is probably being converted to a long-range fighter for anti-flak escort to Torpedo and R[ocket] P[rojectile] Strikes; that will be one in the North.

I think 415 have rather felt in the past that they were rather nobody's baby – they could not be taken seriously as a Torpedo Squadron with the old Hampden, and they had to be used for all sorts of odd jobs like, recently, helping out with the A/S offensive in the Bay. Their new job will be really interesting and valuable – and may become particularly so next Spring. It will afford a good opportunity for varied experience to the C[ommanding] O[fficer], and as it involves a number of detachments at places like Manston and Exeter, will also give good experience to other more junior officers.

They will come out of the line in the next few days to re-equip.<sup>22</sup>

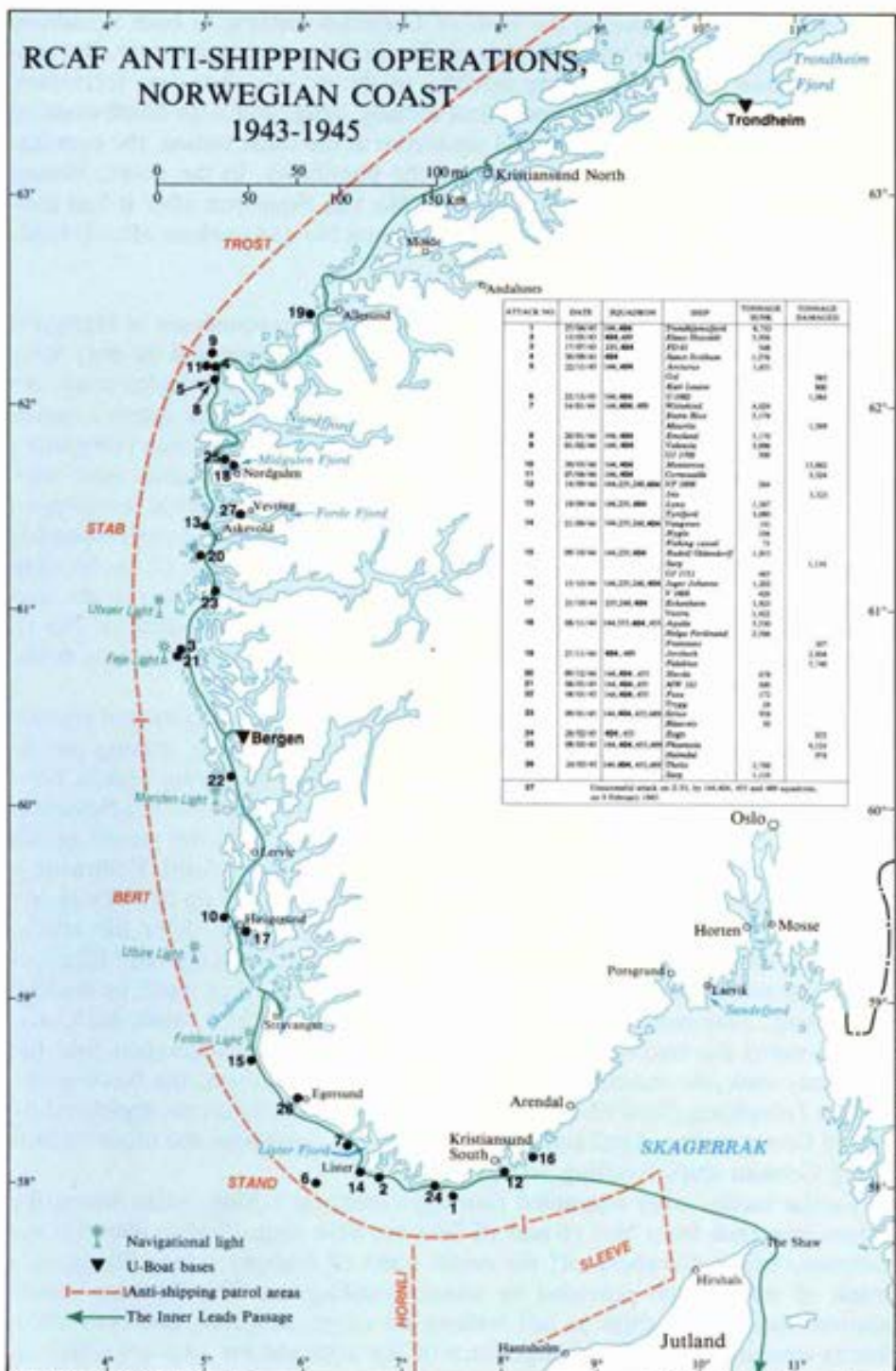
Replacing obsolescent Hampdens with Fairey Albacore biplanes was not exactly what Edwards had in mind, especially when he knew that the other Hampden units in Coastal Command would soon be re-equipping with Beau-fighters for anti-Flak escort work. Citing (in a draft letter that was not sent) his 'responsibilities to the Canadian Government to ensure that Canadian Funds being expended on the RCAF Overseas are productive of maximum results,' he could 'hardly sanction replacement of obsolete aircraft with even more obsolete types which will result in the Canadian effort being still less productive than heretofore.' Furthermore, he added, moving to the kind of operational considerations the Air Ministry so often advanced to support its position, 'the prospect of a Squadron with two types of aircraft will inevitably result in countless maintenance problems coming to the fore and in a very short time will lead to very many difficulties in trying to maintain serviceability.'<sup>23</sup>

Indeed, it appears that Edwards was prepared to go so far as to 'deCanadianize' No 415 Squadron and to use its personnel to better advantage elsewhere but, after meeting with Courtney, he swallowed Slessor's proposals and agreed that it could be equipped 'with Wellington XIII's and Albacores of great and honourable antiquity.' Even so, the Canadian AOC-in-C did not disguise his underlying belief that dominion units were receiving second-class treatment.

415 was specifically mentioned as being one of three (all Dominion) squadrons to be the last on Hampdens. It caused sharp words from Canada and I had hoped that this squadron would have special future treatment. It has got it in a different way ... Jack Slessor explains that they are in the proper group and *the only other Hampden squadrons* are RAAF and the New Zealand squadrons. I could not see the force of this. Nor could I see why this, of all squadrons, should be selected. You explained, and so did Jack, that there was no other way out and that operational expediency demanded this, no matter how objectionable, change. In the face of it there was scant choice. I concurred. I promised to do so in good heart, which I do – but I wonder where 415 will go next.<sup>24</sup>

From a Canadian standpoint, it is unfortunate that Edwards did not press the Air Ministry to team No 415 Squadron with No 404 in an all-RCAF strike wing.

# RCAF ANTI-SHIPING OPERATIONS, NORWEGIAN COAST 1943-1945



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That would have simplified the flow of Canadian aircrew to both squadrons and provided the RCAF with a higher profile in the anti-shipping war. But pre-occupied now with the teething troubles of the RCAF's showcase formation, Bomber Command's No 6 Group, and already struggling with Northwood to co-locate two Canadian Sunderland squadrons at the same station, the overseas AOC-in-C seems not to have considered the possibility. In the event, Slessor had already decided to pair No 404 with No 144 Squadron after it had converted from Hampdens to Beaufighters – leaving No 415 to chase after E-boats in the English Channel.

While No 415 remained in No 16 Group, the other two squadrons of Hampden torpedo-bombers, Nos 455 (RAAF) and 489 (RNZAF), represented the only force available for No 18 Group's anti-shipping strikes off the Norwegian coast. An RAF squadron, equipped with Beaufighter VICs, performed the group's reconnaissance and long-range fighter escort duties while No 144 was completing its conversion to Torbeaus at Leuchars. In early April these units were reinforced by the return of No 404 Squadron from Chivenor. Having re-equipped with Beaufighter XICs while in No 19 Group, the squadron briefly operated from Tain, before transferring to Wick, on the northeast corner of the Scottish mainland, on 20 April. During their twelve-and-a-half month stay at the new station, No 404 would assume a leading role in the development of No 18 Group's strike-wing tactics, particularly in the use of rocket projectiles as the main anti-ship weapon.

Prior to the Canadians' arrival, the group's operations had consisted primarily of Rover patrols and fleet reconnaissances. Indeed, lacking striking power, it made only four attacks on Norwegian coastal shipping during March, none of which inflicted any damage. The situation improved when No 144 Squadron became operational with its Torbeaus and then again with the arrival of No 404, and one of their earliest joint operations came on 27 April. Following a sighting report of a convoy off Lister Fjord, on the southern tip of Norway, six Beaufighters from No 404 and four Torbeaus were detailed for the attack, refuelling en route at Sumburgh in the Shetland Islands. Flying only fifty feet above the sea in order to avoid enemy radar, the strike force made its landfall near Lister. Five minutes later three ships were sighted and, while the Canadians strafed the two escort vessels with cannon and machine-gun fire, the Torbeaus sank the merchant vessel steaming between them, the Norwegian-owned *Trondhjemsfjord* of 6753 tons. This was the third success registered by No 18 Group during April and the second by 144 Squadron, the other victims being German ships totalling 10,645 tons.<sup>25</sup>

Similar tactics were attempted four days later, on 1 May, when two strike forces, one each from Nos 16 and 18 Groups, were dispatched to intercept the German cruiser *Nürnberg* off the south coast of Norway – very likely as a result of information provided by special intelligence. The Germans rarely allowed their larger ships to sail without air cover, however, and both strike forces were intercepted by a large force of Me 109s and FW 190s (of which an average of fifty were based in Norway throughout the summer of 1943) and

one 404 Squadron crew was among the seven lost. Neither force made contact with the German cruiser and their failure to do so reinforced the lesson, already learned on the Dutch coast, that Beaufighter strikes required fighter cover. Unfortunately it would take a further fifteen months before the Air Ministry was willing to apply the lesson to the Norwegian coast and release long-range fighter squadrons to No 18 Group; in the meantime, cloud, not fighters, would remain the prerequisite for success.<sup>26</sup>

Following the 1 May reversal, No 144 Squadron was withdrawn from operations for further training before being posted to North Africa, where the Allies were preparing to invade Sicily on 10 July. Weather conditions, fog and low cloud in Scotland and a lack of cloud cover on the coast of Norway, together with the withdrawal of No 235 Squadron for training with the new 3-inch rocket projectiles in June, further reduced No 18 Group's opportunities for anti-shipping strikes. Consequently, most operations were Rovers by the Hampdens of 489 and 455 Squadrons, escorted by No 404's Beaufighters. One ship was sunk in May and another in June for the loss of six aircraft, none from the Canadian ranks. Meanwhile, the group received a valuable reinforcement with the formation of No 333 (Norwegian) Squadron, a Mosquito reconnaissance unit, which began flying a limited number of missions from Wick and Leuchars.<sup>27</sup>

In the three months since its return to No 18 Group, 404 Squadron had lost only one aircraft on operations. This fact, together with a steady influx of RCAF aircrew, allowed for a substantial increase in its Canadian content from 36.4 per cent in September 1942 to 70.1 per cent in July 1943. Particularly helpful, in this regard, was the fact that the squadron's first RCAF navigators (W) – navigators who doubled as radio operators, for whom there was no training in Canada – had begun to arrive in April. The ratio of Canadian groundcrew during the same ten-month period improved from 65.7 to 82.7 per cent.<sup>28</sup>

Meanwhile, command had passed, for the first time, to an RCAF officer when Wing Commander Gordon Truscott took over in October 1942, replacing Wing Commander E.H. McHardy, a New Zealander in the RAF. Truscott, who had joined the RCAF in 1932, came to the squadron direct from Canada where his last appointment had been as senior air staff officer (SASO) at Eastern Air Command. When he moved on, to Overseas Headquarters as director of air staff in September 1943, he was replaced by another officer from Canada, Wing Commander C.A. Willis, who had led No 8 (BR) Squadron through the abominable weather and logistics problems of the Aleutian campaign for nearly a year without incurring a fatal accident, and who would retain command of No 404 until he was shot down in March 1944.<sup>29</sup>

It was under Truscott that No 404 Squadron began to contribute to the special anti-shipping formation created at Sumburgh in July 1943. Supported by the reconnaissance Mosquitoes of No 333 Squadron, the Canadians would provide anti-Flak escorts for the rocket-equipped (RP) Beaufighters of No 235. Hindered by the poor weather, however, the Sumburgh detachments had to make the most of their limited opportunities (only four strikes were made



between 2 July and 4 August). A gallant effort went unrewarded on 4 July when three of the 404 Squadron crews escorted RP Beaufighters on a shipping strike at Kristiansund, in southern Norway.

Take-off was done in bad visibility and heavy rain, but the weather cleared on the Norge coast. There was no cloud covering ... Our a/c circled the Fjord, drawing the fire, while a/c of No 235 Squadron attacked the target. Two (2) a/c of No 235 Squadron made dummy runs up [to] the target, while the rest weaved around the target in Fjord. The area is well defended and heavy flak was experienced from the shore and also from a small convoy outside the Fjord ... Two (2) Me 109s joined as a/c started to leave target ... The E/A attacked the hindmost a/c, which corkscrewed off in different directions. All but K of No 404 Squadron re-formed to head for base ... When last seen K was covering an a/c of No 235 Squadron ... P/O Rumbel and Sgt. Lalonde have been reported missing.<sup>30</sup>

In these sorties, the 60-lb high-explosive warhead used on 235 Squadron's rockets was unable to inflict mortal damage on any of the merchant ships attacked. The only vessel sunk was the escort trawler, *FD 61* of 548 tons, after it was strafed by cannon fire from a No 404 Beaufighter flown by Pilot Officer A. McDonald.<sup>31</sup>

In addition to anti-shipping strikes, the 404 Squadron detachment at Sumburgh escorted 489 Squadron Hampdens on Rovers, flew a limited number of anti-submarine patrols, and sometimes provided cover for naval forces operating in the North Sea. Normally a routine assignment, the naval cover flown on 28 July resulted in one of the squadron's most remarkable successes. Escorting a task force comprising the aircraft carrier *Illustrious*, the cruiser *Belfast*, and a destroyer flotilla as it made a sortie towards the coast of Norway, the Canadians intercepted and shot down four Blohm and Voss 138 flying-boats from Seeaufklärungsgruppe 130, a long-range maritime reconnaissance group based at Trondheim. Two of these unwieldy, ill-armed machines fell to Flying Officer E.J. Keefe, who was making his first operational flight. One of Keefe's own engines was 'put out of action,' his braking was affected, and he had to retract the undercarriage to avoid running off the end of the runway when he came in to land at Wick. 'Complete write-off of a/c but no serious injury to crew.' The other two enemy machines were credited to Squadron Leader A.L. De La Haye and Flying Officer Sydney Shulemson.<sup>32</sup>

Three of the airmen shot down by Keefe were subsequently rescued by the Atlantic-bound submarine U-489, which was attacked and sunk by a Sunderland of 423 Squadron a week later. The three airmen survived their second ordeal as well, and were among the submariners picked up by a prowling British destroyer. In the long run, Keefe himself was not so lucky. His good fortune – and good shooting – on that occasion had taken him halfway to a

\* A fifth BV 138 was shot down in the vicinity of the task force by a flight of Grumman Martlets from HMS *Illustrious* led by Lieutenant D.R.B. Cosh, a Royal Canadian Navy officer serving with the RN's Fleet Air Arm.



DFC, which was eventually recommended for that feat and for an attack on a 'large enemy vessel strongly escorted by a/a [Flak] ships' in March 1944. But before the award was promulgated, on 7 July, he would be killed in a flying accident on 28 June.<sup>33</sup>

Following a final Rover patrol on 6 August, the 404 Squadron detachment was recalled from Sumburgh. The entire squadron was then withdrawn from operations to re-equip with Beaufighter Xs and conduct RP training. Although the results achieved at Sumburgh had been disappointing, the idea of using rockets as anti-shipping weapons had impressed the squadron's lone RAF pilot, Squadron Leader A.K. Gatward.\* Accordingly, when the squadron began RP training at Tain, Gatward 'set about learning all there was to know regarding this new weapon ... He became the outstanding exponent of this weapon and as his confidence and successes grew, so did the Sqdn become the leading specialist in this type of armament.'

Although Northwood provided some initial guidance, the Canadians were left to develop the tactics for RP attacks on their own. As it gained experience, No 404 chose to organize its formations into two sections of seven Beaufighters each. Each section was composed of four anti-Flak aircraft, of which one, the section leader, was armed with both high-explosive rockets and the normal 20-millimetre cannon and the other three with cannon alone, while the three strike aircraft each carried eight rockets with solid 25-lb armour-piercing (AP) heads. The 60-lb HE warhead was preferred for the anti-Flak role because its 'fragmentation properties and accompanying explosion' was 'bound to play havoc with the morale of the escort vessel gunners,' while a near miss could 'produce a column of water approximately 150 feet high which will obscure the view of the escort vessel gunners at a critical moment.'<sup>34</sup>

Sorties were flown 'at a height varying from 100 feet in good visibility to 500 feet in poor visibility.' Upon sighting the target, the section leader climbed to a height of one thousand feet, with the three strike aircraft a hundred feet above him and the other three anti-Flak machines a hundred feet below. Then 'the cannon aircraft break off into a shallow dive opening fire at 1,500 yards,' while accelerating to over 300 miles per hour and pressing home their attacks to within 500 yards of the escort vessels. The anti-Flak leader added his 60-lb HE rockets to the cannon fire, after which it was the turn of the strike crews, who

open fire with cannon in a 10 degree plus dive from 1,100 feet and when they have closed range to 800 yards or less and cannon hits on the merchant vessels are obtained, a salvo of eight 25 lb RP is fired.

The aircraft carrying the 25 lb AP heads have their sights harmonised for both cannon and RP [by aligning the rocket rails at different angles] ... Tests have shown that when cannon hits are registered on the target and the range is closed to 800 yards

\* Gatward had previously made a name for himself by making a solo Beaufighter flight to Paris in June 1942 to drop a French flag on the Arc de Triomphe and strafe the headquarters of the Kriegsmarine.

or less and a salvo of 25 lb RP is fired, two hits will be obtained 15 to 20 feet below the cannon cone, two 20 feet short, two 40 feet short and two 60 feet short of the target. Thus in the case of a merchant vessel two hits would be in the proximity of the water line and the remaining six will be under water hits.<sup>35</sup>

Northwood had originally anticipated using the high-explosive rocket as an anti-shipping weapon, but soon discovered that the alternative armour-piercing head had 'remarkably good under-water ballistics' that allowed it to 'travel nearly 100 ft. just below the surface with sufficient velocity to penetrate the pressure hull of a submarine.' It 'remained intact on hitting the water and had a long, upward curving trajectory which was ideal for offsetting range aiming errors.' Since the HE head broke away from the rocket on impact with the water, it was only effective in the event of a dry hit, and for that reason alone No 16 Group advised that 'cannon fire is very, very much more effective to silence *Flak* than using RP.' The North Coates wing, however, had never used the more effective 25-lb head in its strikes, leading No 16 Group to conclude prematurely that 'in a large Wing melee with some 30 aircraft and pretty intense *Flak*, crews just are not steady enough in their aim, or good enough at range estimation, to secure any reasonable results with their RP.'<sup>36</sup>

The decrease in No 18 Group sorties after August because of the transfer and re-equipping of Beaufighter squadrons came just as Stockholm announced it would no longer allow Germany to use Swedish facilities or territory (including a small stretch of the Trondheim-Narvik railway) for the transport of war materiel and military personnel to and from Norway and Finland. All German traffic would now have to move by sea; but so long as No 18 Group had to restrict its sorties to periods of cloudy weather in order to avoid clashes with German fighters, the opportunities to take advantage of the enemy's increased vulnerability to anti-shipping strikes would be limited.

Accordingly, on 21 September 1943 Northwood asked the Air Ministry to assign two or three long-range fighter squadrons to Fighter Command's No 13 Group in order to provide escorts for the two strike wings No 18 Group expected to have operational by the end of the year. Although both Mustangs and Spitfire Vs and IXs equipped with 90-gallon drop tanks had sufficient range to do the job, Fighter Command declined the request on the grounds that they might run dangerously short of fuel if there were any delays in assembling the strike formations – and, as Air Marshal Sir Trafford Leigh-Mallory put it, because 'fighter escort [was] a very difficult and fatiguing task in the weather conditions prevalent on the Norwegian coast.'<sup>37</sup>

Some reinforcement was received in mid-October when No 144 Squadron returned from the Mediterranean and re-equipped with Torbeau Xs. Until they were transferred to No 19 Group in early May 1944, in preparation for Operation Overlord, Nos 404 and 144 Squadrons operating from Wick became No 18 Group's main strike force. The Canadians' role in these operations was varied; at times flying anti-Flak escort to No 144's Torbeaus and on other occasions providing the main punch themselves with their 25-lb rockets. The first operation by this Wick wing took place on 22 November, when eight

Beaufighters from No 404 and six Torbeaus from 144 Squadron attacked two merchant vessels and two escorts off Stadtlandet: with the Canadians using only their cannon, the Norwegian *Arcturus* of 1651 tons was sunk. Once again, however, the initial success could not be followed up. No substantial damage was inflicted on the enemy over the next month, while No 404 Squadron lost four crews, including two shot down by Flak during an attack on a U-boat and its destroyer escort on 22 December. That was double the number of casualties suffered in the preceding four months.<sup>38</sup>

Bolstered by the addition of No 489 Squadron's Torbeaus in January 1944, No 18 Group made sixty-five attacks – fifteen more than in December – and sank 15,659 tons of shipping. The Wick squadrons had also refined their tactics, relying increasingly on armour-piercing warheads as the main anti-ship weapon, and they enjoyed better results.<sup>39</sup> On 14 January, for example, a combined force of eight Torbeaus from No 144 Squadron and ten RP Beaufighters from No 404, supported by seven other Beaufighters from No 144 in the anti-Flak role, mounted a Rover off southern Norway in an operation managed largely by the Canadian unit. Wing Commander C.A. Willis led the anti-Flak section from No 144, while Squadron Leader Gatward commanded No 404's strike force until he was forced to return to base when his hatch blew open and could not be closed. Flying Officer W.D. Thomsett immediately took over and 'led the formation northward up the coast.'

Off List[er Fjord] a C[on]V[oy] of three M[erchant] V[essel]'s and two E[scort] V[essel]'s was sighted with a second CV some miles astern. At 1153 all a/c attacked, 'O,' 'G' and 'F' obtaining RP and cannon hits on leading EV. 'M' and 'H' carried out RP attacks from either bow on 4,000 ton MV, 'M' scoring two hits and 'H' four. Explosions were seen by 144 Sqdn Torbeaus who also attacked this vessel. 'H' followed up with a cannon attack on the EV astern. 'U' made RP and cannon attack on EV ahead of second CV. Cannon hits were observed but RP's undershot. 'J' was seen diving to attack but suddenly began to emit black smoke and was lost to sight. 'W' turned in to attack but was hit before it could release RP's. Formation broke off to seaward and s[et]/c[ourse for] base without 'J.' About 120 miles from base 'W' was seen to suddenly lose height rapidly and finally ditch. 'F' circled it but no survivors seen in dinghy. Six a/c landed safely at base, five undamaged, 'O' with damage to starboard mainplane. Crews uninjured. This is the biggest operation by the Wick Beaufighter wing since its formation, 24 a/c taking part. In addition to 404 Sqdn's two a/c, one of 144 also failed to return.<sup>40</sup>

A second strike force of eight aircraft from No 489 Squadron attacked the further convoy. Between them, the three squadrons sank the *Wittekind*, a freighter of 4029 tons, and the *Entre Rios*, of 5179, both iron ore carriers, and damaged the Norwegian *Maurita* of 1569 tons. Six days later, five No 404 Beaufighters and an anti-flak escort from No 144 Squadron attacked a north-bound convoy off Stadtlandet, sinking the German merchant vessel *Emsland*, of 5170 tons.<sup>41</sup> However, other operations mounted that month proved more dangerous to the Beaufighters than to the enemy. On the 16th a mixed force

was patrolling off Stadtlandet when 'two armed trawlers were sighted ... They opened fire and N/404 was apparently hit. Formation s[et]c[ourse for] base at 1426 from Gtterone Light and shortly afterward two explosions were seen from starboard engine of 'N.' It carried on for three minutes, maintaining level course. The pilot was then heard on VHF to say 'This is it, chaps,' the a/c touched down in ditching position, navigator fired a red Very light and the a/c hit the water and broke up. P/144 circled the area but no survivors, wreckage or dinghy seen. All other a/c returned safely to base.'<sup>42</sup> No 404 lost one more machine on 26 January, perhaps because of an unfortunate mistake. Led by Flying Officer Sydney Shulemson, in Beaufighter U, six strike crews from No 404 and six escorts from No 144 were about halfway to Stadtlandet when one of the Canadian Beaufighters developed engine trouble and had to turn back. As it did so, the inexperienced navigator signalled its problem to the remaining aircraft by Morse code, a dangerous break in radio silence that probably alerted the German listening posts along the Norwegian coast. Although the formation arrived off Stadtlandet and attacked three merchant ships and three escorts without interference, they, in turn, were attacked by four Me 109s shortly after turning back out to sea. One Canadian machine crashed in flames and one from No 144 was in danger of suffering a similar fate when Shulemson turned back to engage its pursuer. His fire was 'ineffective,' but the German pilot immediately switched his attack and followed his assailant out to sea. Shulemson 'took violent evasive action, the Navigator opening fire with his B[rown-ing] M[achine] G[un], and eventually gained cloud cover. Emerging 4 minutes later, the E/A was seen 800 yards astern and continued the pursuit for another 10 minutes until 'U' once again gained cloud cover.'<sup>43</sup> Shulemson was awarded the DSO, an exceptional honour for a junior officer.

The Wick wing struck again on 1 February. Fourteen aircraft, including nine from 404 Squadron, made landfall at Utvaer, with the overcast too low to allow for a coordinated attack even if shipping should be sighted through the mist. Squadron Leader Gatward led the formation north in search of better weather and was rewarded when, seventy-five miles up the coast, he found a five-ship convoy off Stadtlandet. Despite heavy Flak, from both the escorts and the shore batteries, the wing's attack was so effective that only two of the Canadian aircraft were slightly damaged while the enemy lost the *Valencia*, a merchantman of 3000 tons as well as the escort trawler *UJ.1702*.<sup>44</sup>

The Germans now began sailing only on days that were too fine and clear for daylight Rovers without fighter escort; and although No 18 Group mounted a further 171 sorties in February they resulted in just six attacks. The number of sorties rose to a peak of 308 in March, but results were similarly disappointing, only three small vessels being sunk. Perhaps the most daring attempt was made at the end of the month, as the strike wings attempted to locate and attack the southbound German troopship *Monterosa* of 13,882 tons, whose sailing had been reported by special intelligence. The five Torbeaus and four cannon-armed Beaufighters from No 144 Squadron and nine 404 Squadron Beaufighters armed with armour-piercing RP found

their prey and her escort – three ships, including a destroyer, and a large number of fighters – near Utsire, north of Stavanger. The *Torbeaus* attacked with torpedoes and claimed two hits. Meanwhile, led by their commanding officer, the Canadians launched their cannon and RP attack despite heavy enemy fire and succeeded in damaging the *Monterosa*, which limped into Aarhus, Denmark, on 3 April. Two aircraft were shot down, including that of Wing Commander C.A. Willis and his crewmate, who survived their ditching to become prisoners of war.<sup>45</sup>

The wing managed only fourteen attacks in early April, all of them coming on the 7th, when the 3324-ton German freighter *Cornouaille* was damaged. Then, in preparation for Operation Overlord, the squadrons were informed that they would be transferred to Davidstow Moor, under command of No 19 Group, to operate against enemy surface craft on the right flank of the invasion.<sup>46</sup>

Although by far the majority (4097 of 5062) of Coastal Command's anti-shipping sorties between April 1943 and May 1944 did not result in attacks – and the effort cost ninety-six crews, 1.8 per cent of those dispatched – Northwood's campaign became increasingly effective following the reintroduction of the composite strike wing at North Coates in April and the subsequent refining of its tactics. This was the case both in absolute terms and in comparison with other arms and services, and especially in the relationship between tonnage sunk per aircraft lost. From March 1940 to March 1943, for example, aerial minelaying (by both Bomber and Coastal commands) had accounted for the sinking of 369 ships totalling 362,000 tons at a cost of 329 crews (1100 tons per loss), while 447 anti-shipping sorties failed to return from operations which sank sixty-one ships totalling 118,000 tons (263 tons per loss). From April 1943 to May 1944, however, mines laid by Bomber Command sank 182 ships of 138,000 tons at a cost of 142 aircraft (972 tons per loss), while Nos 16 and 18 Groups between them sank 49 ships of 112,000 tons for the loss of 96 crews (1166 tons per loss).

For all of 1943 and 1944, aircraft in direct attack at sea accounted for 31 per cent, mines (the majority of which were laid by Bomber Command) and air raids for 25 per cent each, and the various forms of naval attack for 19 per cent of merchant tonnage sunk in these waters – but for most of that period major naval forces were only sporadically involved in the anti-shipping campaign. When a greater effort was made, off Norway between January and May 1944, submarines sank fifteen ships, carrier-based aircraft eight, and Coastal Command's No 18 Group, nine. No 16 Group added another fifteen off Holland, where the water was too shallow for submarines, and surface ships larger than MTBs rarely ventured.<sup>47</sup>

The proportions and relationships given above are not unimportant. Since major Allied warships and submarines were often doing other things, by mid-1943 the responsibility for destroying, damaging, delaying, and diverting German merchant shipping had fallen mainly on Bomber Command's Gardening campaign and Coastal Command's strike wings, and in this respect it

is clear that aerial minelaying, while sinking a larger number of ships, tended to sink smaller ones, averaging about 757 tons, while the strike wings' victims were larger, averaging 2088 tons, and more likely to include the valuable ore carriers. All attacks on shipping, whatever form they took, forced the enemy to change schedules and routeing.

Through special intelligence, the Admiralty (and Northwood) were kept aware of the general impact of the anti-shipping campaign. It had been mitigated to some extent in 1943 by Reichkommissar Kaufmann's program to rationalize Germany's use of maritime resources, but by the spring of 1944 sailings were fully a fifth below his projections. A quarter of all tonnage plying between Norway and Germany's northern ports had been sunk and in May 1944 deliveries of iron ore had fallen to 420,000 tons, just one-third of the May 1943 figure. About one-half of all German naval personnel were engaged in escorting convoys or clearing mines. In June 1944, however, the attack on enemy merchant shipping would all but cease as the Allies turned their attention to Operation Overlord.<sup>48</sup>

Having been chasing E-boats in the English Channel since the fall of 1943, No 415 Squadron was already familiar with the Overlord invasion area. Hunting down these fast motor boats was not an easy task, and it was one which other branches of the service had gratefully abandoned when given the chance to do so. Despite making 187 direct attacks, for example, Fighter Command had not produced 'a single confirmed sinking' before it gave up the job in late 1942 – although it had forced the Germans to limit their E-boat operations to the hours of darkness. The Fleet Air Arm came next, enjoying some success, but it, too, was glad to be out of the business in September 1943, when Coastal Command had taken on the job.<sup>49</sup>

In fact, for all Edwards's doubts, the slow and manoeuvrable Albacores were as well-suited as anything for low-altitude precision bombing attacks against E-boats, and their three-man crews could at least look forward to the possibility of actually inflicting harm on the enemy. Using techniques pioneered by the Fleet Air Arm, the Albacore crews relied on coastal radars to vector them near to their target, at which point they employed their own ASV sets to pick it up. After establishing visual contact, they attacked the E-boat from astern, releasing up to twelve 100-lb anti-submarine bombs. In practice, however, the Albacores had little to do with the E-boats and never did sink one. Employed primarily against the enemy's Channel shipping, the majority of the eleven attacks carried out during their first four months of operations, all without result, were against small merchant vessels, a task for which their old Hampdens would have been better suited.<sup>50</sup>

The Wellington crews, in contrast, while flying only anti-E-boat patrols, never had the satisfaction of making attacks themselves at this time. Carrying no air-to-surface weapons, their business was to locate, report on, and shadow E-boats working farther from shore until Royal Navy gunboats arrived in the vicinity – at which time the Wellingtons were to drop flares to illuminate the



enemy so that the gunboats could make their attacks.\* Codenamed Deadly, Wellington patrols were just that – deadly boring – so that when a delegation arrived at the squadron from Overseas Headquarters on 1 November to ‘discuss personnel problems’ they concluded that its ‘morale is rapidly going.’ Over a forty-day period there had been no more than ten of operational flying, and the Wellington flight, lacking ‘armament and ... bombs ... feel they are merely stooges.’ As for the Albacore crews, the visitors from Overseas Headquarters noted that they ‘hate their aircraft and the type of work upon which they are employed.’<sup>51</sup>

There is no doubt that the Wellington flight was dissatisfied and that it would remain so: no targets were sighted in November, December, or January; its ASV radars and VHF radios were frequently unserviceable; and flares remained its only offensive weapon. Their poor morale may not have been shared by the Albacore crews, however. When he visited Manston on 6 November, Sir John Slessor ‘found no trace of dissatisfaction – rather the reverse,’ and his findings were confirmed by a subsequent Canadian investigation. ‘Although their aircraft are old,’ the overseas AOC-in-C was told in February, and they too moved between Manston and Thorney Island, ‘at least they have the opportunity of hitting the Hun.’<sup>52</sup>

The squadron was nevertheless suffering as a unit. The squadron was divided into two quite separate entities: the Albacore flight at Manston, and the Wellingtons and squadron headquarters at Bircham Newton and Docking, in Norfolk, a hundred miles away by air and twice that by road.<sup>53</sup> With so many of his crews on detachment – Wellingtons were frequently sent to stations as far afield as Wick in northern Scotland while the Albacore flight routinely maintained a four-aircraft detachment at Thorney Island – the commanding officer, Wing Commander C.G. Ruttan, was able to exercise only ‘a bare minimum of operational control,’ and servicing had become complex. ‘Maintenance work of major importance for the Wellingtons and Albacores is carried out at Bircham Newton. Albacore minor repairs and daily inspections are carried out at Manston and Thorney Island. Wellington minor repairs and daily inspections are carried out at Docking and elsewhere as detachments require. These arrangements can hardly be viewed as an asset to good maintenance.’<sup>54</sup>

Ruttan soon made his displeasure known. Speaking primarily for his Wellington crews, and observing that ‘squadrons in Canada get more action than this,’ he asked that No 415 be equipped ‘with modern aircraft’ and be given ‘a good role.’<sup>55</sup> Air Marshal L.S. Breadner, who succeeded Edwards as overseas AOC-in-C on 1 January 1944, was equally dissatisfied with No 415 Squadron’s fate and the state of its morale, and by mid-February he sought Ottawa’s help in securing its transfer to another command. ‘The situation with respect to this squadron is not happy,’ he told Air Minister C.G. Power.

\* Beginning in January, similar procedures were adopted for use against merchant shipping off the Dutch coast in Gilbey operations, with No 415 Squadron again selected to do reconnaissance and drop flares (but carry no bombs) for No 16 Group Torbeaus.

C-in-C Coastal Command maintains that the role of the squadron is vital at the present time and as only squadron properly trained and equipped it must continue until situation changes. There is no indication that this unit will be re-equipped and I do not see the situation changing until we occupy most of the coast of north west Europe. It would help our situation here if you would make known to Balfour your dissatisfaction with respect to assignment given this squadron. I suggest you demand its withdrawal from Coastal Command where it has never had a decent role. It could be allocated to either Bomber Command or Tactical Air Force. Such a move would require some shift of aircrew personnel, re-equipment and training for new role before becoming operative. For this reason it is bound to be resisted on operational grounds.<sup>56</sup>

Power agreed, and taking advantage of the presence in Ottawa of the British parliamentary under-secretary of state for air to negotiate a major reduction in the size of the BCATP, he asked for the transfer, observing that he was 'not ... very happy about the government of Canada paying for and maintaining a squadron operating on obsolescent aircraft.' Breadner made the same case to Air Marshal Sir Sholto Douglas, the new AOC-in-C at Northwood.<sup>57</sup>

Recognizing that the experiment of a split squadron had not worked, Northwood was ready in mid-February to form two squadrons, one on Wellingtons, the other on Albacores, 'regardless of RCAF participation,' and from 1 March the Wellingtons began to carry bombs on their Gilbey missions off the Dutch coast. By now, however, making either of the two squadrons Canadian would not have addressed Ottawa's other concerns. It wanted fewer coastal squadrons, but if it insisted on transferring No 415 to Bomber Command, there would be a problem of what to do with its existing crews, who had been trained for, and were experienced in, very specific and limited maritime roles.<sup>58</sup>

Matters came to a head in early March, when the Air Ministry offered to transfer No 415 to No 6 Group as soon as a replacement squadron had been formed in Coastal Command. Overseas Headquarters welcomed the proposal even while acknowledging that it would do little to address the immediate morale problem.

While the original intention was to help the personnel in 415 Squadron as well as RCAF efficiency generally, it now appears that the two objects cannot be accomplished by moving the Squadron to Bomber Command.

As the crew composition is so different and the work of the Squadron bears little, if any, similarity to Bomber Command, it is suggested that if 415 moves to Bomber Command, only the HQ should go and new personnel make up the establishment. The present Squadron crews could finish their tour with the RAF Squadron taking 415's place or be used to staff a 'nominated' GR Squadron. This situation would not appeal to the present personnel of 415 in every way, but at least in the future we would have one less Coastal Command Squadron to worry over.<sup>59</sup>

The proposal to, in effect, disband No 415 in Coastal Command and create a new 415 Squadron in Bomber Command won quick approval, although implementation would have to be delayed until after Overlord had taken place.

However, in a sad but somehow fitting dénouement, the squadron itself was not fully apprised of the intended move until Wing Commander C.G. Ruttan innocently asked London to explain why so many RAF air- and groundcrew were being posted to a supposedly Canadian unit.<sup>60</sup>

The armed reconnaissance missions flown by No 415 Squadron's Wellington flight in the three months before D-Day were only marginally more successful than its unarmoured Deadly and Gilbey patrols. Their only success came on 5/6 March when Flying Officer R.H. Watt located a convoy northwest of Borkum. After homing four Torbeaus onto the contact, Watt dropped his bombs and illuminated the ship with flares, allowing the Torbeaus to sink the Swedish *Diana*, of 1878 tons.

Success did not always require that the Canadians make an attack.<sup>61</sup> On 30/31 March, for example, Flying Officer J.A. Enns made contact with a group of E-boats that stopped 'several times ... to try and put A/C off trail,' but Enns's crew: 'illuminated vessels and kept transmitting position to base. Base sent out 2 M[otor] T[orpedo] B[oats] to engage enemy, but after being illuminated and unable to cross patrol [path] of A/C [unobserved], vessels gave up and turned for home at high speed, before our naval forces were able to arrive and engage. High compliments have been paid to crew for their very efficient work during contact with enemy forces on this patrol. Encountered flak from E/boats several times during shadowing, but no damage to A/C or crew resulted.'<sup>62</sup>

Albacore operations from March to May led to a slight increase in the number of attacks and eventually produced the flight's first confirmed successes. On the night of 23/24 March five crews were dispatched to intercept the escorted Italian vessel *Atlanta*, of 4401 tons, on passage through the Channel to Germany. Two of the crews dropped their bombs on the convoy and damaged the target despite fierce return fire that mortally wounded Flying Officer A.F. Hughes, one of the navigators. (*Atlanta* nevertheless managed to complete her voyage.) The most spectacular action, however, came two months later, in the early morning hours of 24 May, against *Greif*, a large torpedo boat-destroyer of the Möwe class, boasting three 127-millimetre main guns and four 37-millimetre anti-aircraft guns. Part of a flotilla of five similar boats and a number of minesweepers moving from Cherbourg to Le Havre, *Greif* was attacked by a single Albacore. Flying Officer W.G. Brasnett (who had claimed a minesweeper the day before) pressed home his strike from 2000 feet and observed one clear hit, a 'large glow' from the target still visible several minutes later. In fact *Greif* had been struck twice, the forward boiler-room caught fire, water poured in, and the boat sank during a futile effort to tow her to shore. Brasnett's accomplishments in these few days earned him the DFC.<sup>63</sup>

In the four months prior to Overlord the Allied air forces had established overwhelming daylight superiority over the French, Dutch, and Belgian coasts – in fact, wherever air superiority fighters could reach. After losing two crews in early February 1944, one definitely and one probably to enemy fighters, the Canadians were not intercepted again until 24 June, and then only at night

when a Wellington was attacked by a Ju 88 off the Dutch coast. Indeed, enemy aircraft were reported as being in the vicinity on only ten occasions during this period. Forced to concentrate its fighters against the bombing raids on Germany and on the Wehrmacht's lines of communications between France and the Reich – and never particularly strong in night-fighters – Luftflotte 3 was a greatly diminished opponent.<sup>64</sup>

As we have seen, Northwood's planning for Overlord had been complicated by Sir Charles Portal's proposal to eliminate thirty-two maritime squadrons from Coastal Command's order of battle, including all its Beaufighter strike squadrons,<sup>65</sup> and it was only after the VCAS and DCAS had stepped in to oppose the proposed cuts that Sir Sholto Douglas had a clear idea of what resources he would have on hand to defend the flanks of the invasion against interference by enemy surface craft. When Coastal Command's Overlord directive finally appeared in April, No 16 Group was to deploy five of the seven Beaufighter strike squadrons in the invasion area, three at North Coates and two at Langham. The group also had No 415's Albacore flight and an FAA Swordfish squadron at Manston available for anti-E-boat patrols in the Channel, while No 415's Wellington flight was assigned to anti-shipping reconnaissances on the eastern flank. The remaining Beaufighter strike squadrons, Nos 144 and 404, were to be stationed at Davidstow Moor, in Cornwall, in No 19 Group, while a detachment from No 415's Albacore flight was to operate out of Bolthead.<sup>65</sup>

The directive also laid down a number of tactical changes. Given 'the shallow draught of destroyers and the small target presented by E and W-Boats' [fast midget submarines which the Allies thought were being developed], torpedoes would not be carried by the Beaufighter squadrons during Overlord. Instead, they were to rely on 'RP and bombs as primary weapons against destroyers, with cannon as the anti-flak weapon; on cannon against E and R-Boats, with bombs as a secondary weapon; and on bombs against W-Boats, with cannon as a secondary weapon.' As far as rocket projectiles were concerned, only two Beaufighter squadrons, one of them No 404, were to retain them as anti-ship weapons; and although Northwood had initially decided that only the 60-lb HE head was to be used, after being reminded of the success No 404 had enjoyed with the 25-lb AP head, it was agreed that both squadrons would employ the tactics and RP harmonization developed by the Canadians. The remaining Beaufighter strike squadrons were to carry two 250-lb wing bombs and two 500-lb bombs under the fuselage.<sup>66</sup>

According to Allied estimates, the Germans had deployed 'some 460 miscellaneous surface craft' along the French and Belgian coasts, the most important being 'five "Z" class destroyers, five Möwe class and one "T" class torpedo boats, and 34 E-boats.' (Based on special intelligence, these figures were extremely accurate, exaggerating the enemy's strength by just two torpedo boats and missing the presence of a captured Dutch destroyer.) To counter this threat, particularly that posed by the five destroyers, Nos 144 and 404 Squad-

<sup>65</sup> Coastal Command also had one Beaufighter and one Mosquito long-range fighter squadron protecting the Biscay anti-submarine aircraft.

rons began an intensive training program in mid-May, with the technique of night attacks receiving special attention.<sup>67</sup>

On D-Day itself, No 404 Squadron flew its first sorties at 1820 hours when fourteen aircraft were dispatched on an anti-shipping sweep along the Biscay coast, together with seventeen Beaufighters and eight Mosquitoes of RAF squadrons. This strike force intercepted three destroyers off St Nazaire and, with the British Beaufighters providing anti-Flak protection, the Canadians attacked with their 25-lb RP, hitting two and leaving one on fire amidship. A follow-up strike located the damaged destroyers still sailing north in the early morning hours of 7 June, off Penmarch Point, south of Brest.

Five aircraft [‘made up of practically new crews’] on individual take off to attack the target damaged earlier in the evening. Airborne 0027/7. They proceeded singly on the same track ... The target of what appeared to be three Narvik destroyers was sighted and the center ship was smoking at the time of sighting. A/C K attacked the center ship, releasing his RP in pairs. The last pair were released from a distance of 200 yards. A/C K claims two direct hits and at least two underwater hits. On pulling away the tail wing received a bullet hole and the navigator’s cupola was shattered ... A/C G attacked the first ship going in to 400 yards [before] firing a salvo. Hits by all of them are claimed. A/C Q attacked the rear destroyer and four direct and four underwater hits are claimed. As a/c Q pulled away an explosion was observed from either the 2nd or 3rd ship that lit up the ship ahead. A/C Z and J became separated from the main force and were too far away to attack, but bear out the report of the explosion. They claim that there was a red glow which increased to explosion with a burst of flame 200 ft. high. The ship was seen by all crews to be afire from stem to stern in the interior.<sup>68</sup>

Despite these dramatic accounts of success, the destroyers were not seriously damaged. *Z.32* was taking on water from several hits just above the waterline. Rockets had also holed her port side oil bunkers and flooded her rudder compartment, her forward W/T office was destroyed, and one rocket had passed clear through her forward magazine without causing an explosion. (Her crew later found the solid-shot warhead in the hydrophone office and assumed it was a dud.) *Z.24* also had her oil bunkers holed and several large fires started. *ZH-1* had meanwhile escaped attack by sailing close in to starboard of *Z.24*.<sup>69</sup>

Thirty-six hours after putting in to Brest to land their dead and wounded, weld plates over the rocket holes, mount more powerful anti-aircraft guns, and replace damaged equipment, the destroyers sailed for Cherbourg, together with the torpedo boat *T.24*. At 0120 hours on 9 June they were intercepted and brought to action by the 10th Destroyer Flotilla (which included HMCS *Haida* and *Huron*) thirty miles northwest of the Ile de Batz. One was sunk, and a second set on fire and driven ashore by the Canadian destroyers. The third destroyer and the torpedo boat escaped and returned to Brest. After making further repairs they returned to the Gironde, where they would eventually be sunk by a 404 and 236 Squadron strike on 24 August.<sup>70</sup>

For the remainder of June, No 404 Squadron flew regular Rover and anti-submarine patrols between the Gironde estuary and Cherbourg. What little shipping that was sighted, mainly minesweepers and escort craft, kept too close to the coastal Flak batteries to be attacked. The Canadians' only success came during the early morning hours of 30 June when ten aircraft, escorted by RAF Mosquitoes, attacked a small convoy west of Lorient, using 25-lb and 60-lb RP to sink the escort vessel *UJ.1408*. Then, with allied armies firmly established in Normandy and only the one destroyer, *Z.24*, and one torpedo boat remaining operational on the Biscay coast, the squadron was transferred to Strubby, on the east coast of England, in No 16 Group, to attack enemy shipping plying between Rotterdam and the Kiel Canal.<sup>71</sup>

No 415 Squadron spent its last two months in Coastal Command flying night patrols against E-boats. Overlord only increased the pace of the squadron's operations, however, and not their effectiveness. The Canadians' main encounters were those of the Wellington flight during attacks on the nights of 6/7, 7/8, 9/10, and 12/13 June and none of the E-boats engaged were hit, although the crews claimed nine sunk and three damaged. One of the Wellingtons was shot down and its crew lost during the last of these attacks. The Albacore flight operated detachments from Manston, Thorney Island, and Winkleigh, on the Channel coast, but had no success despite numerous interceptions and frequent claims of direct hits. The majority of Albacore sorties during the last half of June and early July were smoke-laying missions over the Channel to provide naval cover.<sup>72</sup>

On 12 July No 415 Squadron was officially transferred to No 6 Group, Bomber Command, although maritime patrol sorties continued to be flown until 20 July and the squadron's headquarters staff did not move to RCAF Station Eastmoor, in Yorkshire, until 26 July. The Wellington crews that had not already been posted to other units were absorbed into No 524 Squadron, while the few remaining Albacore crews reformed as No 119 Squadron. Both Nos 119 and 524 therefore had relatively large Canadian contingents, nineteen aircrew serving with the former and seventy-four on the latter. The aircrew strength of the new 415 Squadron was built up by posting an operational crew from each of twelve squadrons in No 6 Group, plus five new crews from 432 Squadron, the other RCAF bomber unit at Eastmoor.<sup>73</sup>

The weakness of the German navy's response to Overlord soon enabled Northwood to reassign six of its Beaufighter squadrons to anti-shipping operations along the Dutch and German coasts, leaving only a squadron at Manston, and the Wellington, Albacore, and FAA Swordfish squadrons near Dover, to cover the eastern flank of the invasion area. The RCAF's lone remaining anti-shipping unit, No 404, continued to use its proven mix of cannon fire and 25-lb AP rockets, as did No 236, which had recently trained using the Canadian technique. Three of the other Beaufighter strike squadrons reverted to the torpedo as their principal weapon.<sup>74</sup>

Daily patrols were made of the Dutch and German coasts by low-flying Beaufighters and, if suitable targets were located – often ones predicted by



Enigma intercepts – wing strikes of thirty to forty machines were then dispatched. On 6 July a strike by the Strubby and Langham wings on a convoy north of Nordeney Island sank the German ship *Stadt Riga* of 3002 tons and badly damaged the *Ernst Brockelmann* of 1900 tons. The ten 404 Squadron aircraft taking part in the strike all claimed 'underwater and direct hits with RP on several of the M[erchant]/V[essels].' Two days later a dawn sweep by forty-one Beaufighters of the Strubby and North Coates wings, including ten from 404 Squadron, attacked a convoy of six merchantmen and ten escorts off the mouth of the Weser River, sinking three of the freighters and two escorts. The results left the Canadians 'very enthused about working with these other squadrons,' with 'much comment [being] made on the accuracy of the North Coates and Langham' torpedo squadrons.<sup>75</sup>

Forty-six Beaufighters made a night strike against a well-escorted, five-ship convoy north of Nordeney Island on 18 July, but sank only one of the escorts despite losing three aircraft. The ten Canadian machines all returned safely, although two were damaged by Flak. A forty-five aircraft attack, including twelve 404 Squadron machines, against nine merchant ships and twenty-one escort vessels north of Nordeney, sank the Finnish merchantman *Orient* of 4160 tons and one escort, without loss, at last light on 21 July. The Germans, by using motor minesweepers commonly referred to as R-boats, each of which mounted two 37-millimetre anti-aircraft guns, were able to increase the number of escorts for their coastal convoys. Although the more numerous escorts accounted for eight strike aircraft during July – none from 404 – the Beaufighters sank sixteen vessels, including five merchantmen, totalling 14,437 tons. Their success was aided by the complete absence of the Luftwaffe, but Northwood was convinced that the enemy would soon return to providing fighter cover for its convoys. At the end of July, therefore, the Air Ministry agreed to direct No 12 Group to supply Mustang escorts for all strikes on the Norwegian coast and either Mustangs or long-range Spitfires for those going to the North German coast.<sup>76</sup>

By the beginning of August, Operation Cobra, the First US Army's beach-head breakout launched on 25 July, had isolated Brittany and forced the Germans to transfer their surface forces – such as they were – to the southern Biscay ports while redirecting their Atlantic U-boats to Norwegian bases. Realizing that 'every available ship in Western France from Brest to Bordeaux was pressed into service to keep the beleaguered garrisons supplied,' Douglas quickly redeployed his two RP Beaufighter squadrons to No 19 Group to make 'the best of this opportunity,' No 404 moving all its available aircraft to Davidstow Moor on 5 August and commencing operations along the Biscay coast the next day. On 8 August a wing strike by Nos 404 and 236 squadrons sank four M-class minesweepers south of St Nazaire for the loss of one Canadian crew; on 12 and 13 August they accounted for three Sperrbrechers (merchant ships heavily loaded with anti-aircraft artillery), a minesweeper, and a harbour defence vessel; and a week later sank yet another minesweeper, as well as an escort vessel, thirty-five miles northwest of La Rochelle. The next day it was the turn of the destroyer *Z.24* and torpedo boat *T.24* in the mouth

of the Gironde. At that point, with elements of General George Patton's Third US Army driving hard towards the Biscay coast, German maritime operations in the bay were clearly at an end.<sup>77</sup>

As early as 13 June 1944 Northwood had prepared an assessment of the importance of Norwegian coastal shipping in view of the altered strategic situation resulting from Overlord. Planning was based 'on the assumption that ... at least 150 U-boats would be based on Norway, of which about 30 would operate against Russian convoys from bases in the extreme north.'

Facilities are available from which this total could be operated, but the geography of the country, and above all its communications would make maintenance and supply a considerable undertaking ...

If this new phase of the U-Boat war develops as suggested, the task of the strike squadrons of No 18 Group would be more clearly defined and urgent than ever before, and on their ability to interfere – presumably in cooperation with carrier borne aircraft, and our submarines – will depend the extent of which the enemy will be able to send serviceable U-Boats to sea. In this connection it is perhaps noteworthy that the two 18 Group Strike Wings, operating without fighter cover, our own submarines, and latterly a limited number of strikes by carrier-borne aircraft, were able in the first months of 1944 to sink or seriously damage rather more than one ship out of every five sailing along the Norwegian coast. Such a soft spot, in the enemy's organisation, as envisaged above, has never been accessible to us before, and should be productive of greatly enhanced results if properly exploited.<sup>78</sup>

In an effort to restrict German shipping even further, the Allies asked Stockholm to stop all trading with Germany. The Swedes, however, were as yet unwilling to initiate a complete break and would only agree to withdraw marine insurance from ships sailing to Dutch and German ports lying west of Kiel. Within days the Allies issued a reminder of the hazards Swedish ships would face, timing their words to coincide with the reopening of the mining campaign in the Baltic and Kattegat and an air raid on Stettin that added three more vessels to the Swedes' mounting losses. On 18 August the Swedish government withdrew marine insurance for all ships sailing to Axis ports;<sup>\*</sup> and on 19 September the Germans were also denied the use of Finnish shipping when that nation signed an armistice with the Soviet Union.<sup>79</sup>

Two Mosquito and two Beaufighter squadrons, including No 404, were moved to Banff, Scotland, in early September in order to re-open No 18 Group's offensive against Norwegian coastal traffic. Prior to the shift, Wing Commander A.K. Gatward was replaced as squadron CO by Wing Commander E.W. Pierce, who had been one of the unit's first RCAF aircrew in May 1941. Although born and raised in England, Pierce had emigrated to Canada three years prior to joining the RCAF in July 1940. During a two-year tour with the squadron he had developed a reputation as 'a very good officer and operational

\* Sweden reluctantly closed its Baltic ports to German shipping on 27 September and finally placed a total embargo on exports to Germany on 1 January 1945.

pilot' and he now returned after spending a year as a flying instructor at a Coastal OTU. With his arrival the RCAF content of No 404 Squadron included thirty-four of the thirty-six pilots and all but three of the 131 groundcrew. Even the squadron's previous shortage of Canadian navigators (W) was reduced, with twenty-two of the thirty-six on strength now being members of the RCAF.<sup>80</sup>

The four-squadron Banff wing commenced operations off the Norwegian coast on 6 September and by the end of the month had flown eleven strikes or sweeps. Only two, on 14 and 19 September, led to attacks on convoys, accounting for two merchantmen and one escort vessel for the loss of two aircraft, while a wing sweep on the 21st sank three small vessels.<sup>81</sup> These operations also re-acquainted the strike squadrons with the difficulties in attacking shipping along the coast of Norway.

Our knowledge of enemy movements on the Norwegian Coast south of KRISTIANSUND NORTH has always been very much less complete than in other areas. This, combined with the greater distance from our bases and the topographical difficulties, has resulted, according to recent statistics, in less than half the interceptions per sortie which we have been accustomed to obtain on the Dutch Coast ...

In spite of these difficulties our operations against Norway have not been without their effect. Already the enemy sails south of STAVANGER by night only, lying up in narrow fiords like FARSUND and EGRSUND most of the day. However, because it is difficult for him to get in and out of these places in the darkness, it has been his habit to sail before night fall and to wait until after dawn before entering these anchorages.

North of STAVANGER the position is reversed. The channels through the Leads are so narrow that night sailings are avoided and shipping is found moving in small convoys of usually not more than three or four merchant ships with three or four escort vessels. Here the enemy has a good warning system and it is his practice, as soon as the presence of our aircraft is detected, to move into the nearest anchorage where the steepness of the coast or the land defences make attacks unprofitable. Because of this large strikes, preceded by reconnaissance aircraft, in this area have been largely unsuccessful.<sup>82</sup>

To meet the problems presented by these tactics, No 18 Group adopted a technique known as the Drem system (after the Scottish base where it originated), which was aimed at positioning a strike wing off the enemy coast at first light in order to catch convoys before they turned into a defended anchorage. Since 'the technique of wing operations demanded accurate and compact formation flying' that could not be done in darkness, 'experiments and trials in August had resulted in a scheme to provide an illuminated rendezvous at sea. A single night flying aircraft was to lay flame markers in a pre-arranged position off the enemy coast near to the datum of a planned dawn strike. The wing was to take off singly in the dark, fly out to the enemy coast in loose order and on picking up the flame marked rendezvous was to circle it, form into close battle formation in the faint pre-dawn light and be on the enemy convoy route at the desired spot during the twilight