RCAF. A fabric-covered biplane, with two open cockpits in tandem, it was powered by a radial air-cooled engine and had a maximum speed of 113 mph. He found it 'a nice, kind, little aeroplane,' though the primitive Gosport equipment used to give dual instruction in the air was 'an absolutely terrible system. It was practically a tube, a flexible tube' through which the instructor talked 'into your ears ... like listening at the end of a hose.' MacKenzie went solo after ten hours. His first solo landing was complicated. As he approached, other aircraft were taking off in front of him, forcing him to go around three times. 'I'll never get this thing on the ground,' he thought. His feelings changed once he was down. 'It was fantastic. Full of elation.'

Although they were given specific manoeuvres to fly while in the air, '99% of us went up and did aerobatics ... instead of practising the set sequences.' Low flying was especially exciting, 'down, kicking the tree tops, flying around just like a high speed car.' The only disconcerting part of the course was watching a fellow pupil 'wash out.' 'You would come back in the barracks and see some kid packing his bags,' he remembered. 'There were no farewell parties. You packed your bags and ... snuck off ... It was a slight and very sad affair.'

Elementary training was followed by service instruction as either a single- or dual-engine pilot. There was no 'special fighter pilot clique' among the pupils, but MacKenzie had always wanted to fly fighters and asked for single-engine training. There was no problem about that in September 1940, with the Battle of Britain at its climax. Although the pilot production ratio was supposed to be one single-engine pilot to two dual-engine ones (already scheduled to change towards a ratio of 1:6.5), twin-engine trainers were in extremely short supply, and the first SFTSs opened as single-engine schools. He was posted to the first transferred RAF SFTS, No 31, just then being established in Kingston, Ont., and intended to train Royal Navy Fleet Air Arm pilots. The first British pupils were not due to arrive until the end of 1940, and, in the interim, two regular BCATP classes were trained at No 31. MacKenzie was on the first of these courses, arriving there on 6 October 1940 and starting work two days later.

He found the school efficient, the discipline 'quite noticeable,' and the instructors stiff. The biggest shock was the 'really strange' British food. 'For instance, one of their favourite breakfasts is semi-cooked bacon, tomatoes, and toast. So, if you go up ... and do air battles ... after you have greasy bacon and stewed tomatoes, oh boy, is it ever tough to keep it down.' Such culture shock worked both ways. The British war diarist at 31 SFTS noted the problem differently.

> Our messing in the Airmen's Mess is not satisfactory, due to poor cooking but mainly the difference in the ration issued compared with the U.K. There is no cash element and the rations do not include either Liver, Kidney, Tinned Fruit or Mustard, so these popular dishes are never seen on the menu. They do include, however, Rice, Macaroni and Prunes – all highly unpopular dishes with British Troops.
>
> This is the only country I have served in where both the rates of pay and the standard messing has been different to normal service practice. Undoubtedly the men do not appreciate the changes.
>
> ... These pin pricks, are in sum, a serious proposition.[63]

MacKenzie flew Harvards at Kingston. The Harvard was a metal-skinned monoplane boasting enclosed cockpits, a controllable pitch propeller, retractable undercarriage and flaps, with a maximum speed of 180 mph. Moving up to this larger aircraft 'was a tremendous step ... It just scared the daylights out of you.' This feeling did not last long, for the second Canadian course trained on Battles. 'The Fairey Battle was twice as big as a Harvard. Once we got used to flying a Harvard and got over the shock of going from a Fleet Finch to a Harvard, then the Fairey Battle was so much bigger that we were a little bit jealous of the junior course ... [Their aircraft had] been in the Battle of Britain and the Fall of France and ... were real war planes.' Slow and underarmed, the Fairey Battle had proven an operational disaster, however, and was being relegated to training status as fast as the RAF could find better machines.

Link training continued, mostly concentrated on instrument flying 'underhood.' For the first time, MacKenzie flew at night and loved it. 'The whole thing was exciting ... It was much better than going to a party.' They now had more freedom while flying. Officially, they were given the impression that stunting would be punished, but as future fighter pilots they were also 'almost encouraged' to experiment with the aircraft. Inevitably they took chances. MacKenzie and two others looped the Thousand Island Bridge over the St Lawrence River in formation one day, a stunt that, years later, 'scares me to look back upon.' During 1941 there were 170 fatal training accidents, forty of them being attributed to unauthorized low flying and aerobatics by pilots whose skills did not match their daring.[64] For MacKenzie and his companions in single-engine schools the hallmark of good flying was 'freedom and bravado.' They got white scarves and flying goggles and taxied and flew their aircraft 'like the Canadian Red Baron.' There was still something of the First World War's adventurism and romanticism in flying, an air of exciting improvisation about the whole experience.

Although steps were already underway to reduce SFTS training to a homogeneous ten-week course, MacKenzie's school had not yet implemented these changes. No 31 SFTS ran a thirteen-week, two-phased course at intermediate and advanced levels, the latter concentrating mostly on formation flying and aerobatics in a separate section under different instructors. In accordance with prewar and initial wartime practice, wings were awarded after the intermediate course. MacKenzie received his without ceremony several days later. 'We got our wings in navigation class. You see our training didn't stop ... Group Captain [A.] Shekleton [RAF, commander of 31 SFTS] came in and said, in his British accent: "Well, chaps, you've made the grade and passed your wings check." He had ... a cardboard box of RAF wings, and he ... said: "Come up here, and if you've got 22 cents in your pocket, that's what they want from stores; 22 cents to pay for the wings. Each of you can take a set, and my congratulations chaps. You've all done well." That was our wings parade.'

All pupils graduated as sergeant pilots and one-third of them were commissioned immediately after graduation. MacKenzie remained a sergeant. The BCATP was still expanding at an accelerating rate and, like the great majority of

Canadian graduates at that time, the whole class was posted to be trained as instructors. 'It was a big surprise ... we were told rather nicely that this was a necessary thing, [that] we needed instructors in the Joint Air Training Plan ... It was one of the most disappointing days of my life ... However, once we got to [CFS] Trenton and started on the instructing course, you just had to make up your mind that you were going to do a good job of that too.'

MacKenzie spent two years as an instructor at SFTSs at Yorkton, Sask., and Hagersville, Ont., and at the Central Flying School at Trenton, winning his commission in March 1942. In that time he trained many pilots who were posted to operational theatres. In February 1943 he finally went overseas, to an operational training unit in the United Kingdom, where he flew Spitfires. He went on to complete an operational tour, being credited with 8¼ victories and winning a Distinguished Flying Cross. MacKenzie remained in the postwar RCAF, served in Korea as an exchange pilot with the US Fifth Air Force, was shot down while patrolling south of the Yalu River, and was held prisoner by the Chinese for two years. He eventually retired from the RCAF in 1966, with the rank of squadron leader.

In the fall of 1942, while MacKenzie was a senior instructor at 16 SFTS, at Hagersville, Ont., a seventeen-year-old high-school student, Sydney Francis Wise, together with fourteen other members of Toronto's Riverdale Collegiate football team, went down to volunteer as aircrew, *en masse*. At the time the only Canadian service carrying the war to the enemy and actually attacking Germany was the RCAF; accounts of fighter sweeps and bombing missions filled the airwaves and the columns of newspapers, painting the air war in tones of excitement and glamour. There was a delay of several months, however, before any of the students were enrolled. They were not surprised; they had been warned that there was a waiting list for aircrew and knew of the RCAF's popularity. A medical examination which revealed spots on Wise's lungs delayed his enlistment further, and he did not join with the rest of the team. He was finally enrolled 12 May 1943, aged eighteen-and-a-half.

Wise was posted to 5 Manning Depot, Lachine, Que. He had been, like all his male high-school contemporaries, a member of a cadet corps, so the military organization and discipline at the depot did not surprise him. He was startled, however, to find out 'how totally your life was controlled by the junior NCOs. That was a shock, because we had been given the impression ... that we were the cream of the crop.' His new masters seemed to look on him as skim milk.

It might be thought that, by this stage of the war, nearly all aircrew would have been teenagers. Not so. 'The exceptions stood out. These were people we thought were vastly older than ourselves. For the most part they would represent about 30% of the intake. They would be people who were either university graduates or had had some university or had in fact been in business for some years. They were clearly, now I think back, in their mid-twenties, but they seemed very old to we 18- and 19-year-olds, which is all we were. Naturally they assumed ... higher status positions than we kids. They were the father confessors and they were the people who set the norms for the group and so on. Not the

NCO's.'[65] When they received the white cap flashes which marked aircrew trainees after basic training, 'we were very proud of them ... we felt it set us apart ... one little distinctive symbol can make you feel first part of a group and then something special.' It was just as well they felt this way, since their post-depot employment was decidedly ordinary. In 1941 and 1942 all recruits waiting to enter aircrew training had been employed on 'tarmac duties' – a synonym for fatigue and internal guard duties that might or might not have anything to do with flying. By 1943 educational standards had been lowered in order to keep up the enlistment rates, and a good proportion of new recruits were academically underqualified for aircrew training. Their time in the buffering pool was now likely to be spent in a classroom, upgrading their academic skills in mathematics and physics, but those like Wise who did not need such tuition still went to tarmac duties.

Wise's course was kept at the manning depot for about two weeks: 'odd jobs, shovelling coal and painting barrack blocks and things of this kind.' Although a syllabus had been prepared in December 1941 to give training to pupils during this waiting period, Wise's group received only a little parade-square drill. Attempts to avoid the worst of the make-work projects could easily backfire. 'One day our flight sergeant, a French-Canadian, came before our flight and said, "I want two painter." We had been shovelling coal and it was a bloody dirty job. Two fellows ... both of whom were sort of "angles" men and were looking to get out of a tough job, volunteered. That was the last we saw of them, because the flight was posted out, went to ITS, went through EFTS, and then went through SFTS. On the day I got my wings at Centralia, and was going out the gate, [they] ... were coming in the gate ... They had been "painter" ever since ... Quite literally they had fallen six months behind us, because SFTS by that time was running 20 to 24 weeks.'

A few at a time, the recruits left for initial training school. Wise went to 3 ITS, Victoriaville, Que., in June 1943. The course had lengthened to ten weeks from the four experienced by MacKenzie in 1940, and the content had been improved. A standard précis was now issued, and properly trained instructors provided. There was a good deal of math, and Wise found it 'the toughest intellectual challenge I had faced up to that point.' Throughout the course 'You knew you had to deliver ... Suddenly you were right up against it because you realized the relationship of the performance there to how you were going to be selected at the end of the ITS period. You knew that academic performance was going to have a bearing on this. You also knew that officer-like qualities were being examined, and so on. So you were on trial, and I think that there was a common consciousness of this right through the group.'

The final stage of their ITS course was an appearance before an aircrew selection board. 'We all regarded it as *the* key, decisive, fifteen minutes. You were brought before a board which consisted of officers who themselves had had [operational] tours. It was really the first time we had ever been up against what I would refer to as the "real" air force, the real fighting air force, instead of training ... They may not have been that old but, my god, they had old faces. It was an extremely serious business ... I can remember that I sweated ... Most

people they asked whether or not they would consent to be air gunners, because there was a real demand for that. The correct answer was yes, and then you stood a chance of being selected for something else.' Wise's feeling was that they no longer were really interested in selecting for pilot and were more interested in the other aircrew trades. Whatever the choice, however, pupils accepted it. 'We felt sorry, as a group, for the people who'd been selected air gunner ... first, because we thought the really challenging jobs were elsewhere in aircrew and secondly we knew then what the casualty rates were. We knew very well!' In fact, pilot casualty rates in Bomber Command were the highest of all aircrew categories, perhaps because, in training or operational emergencies, the pilot usually had to 'stick with the plane' until everyone else had baled out. In general at this stage of the war, wireless operators and air gunners were sent straight to specialist training after manning depot, so those selected from his ITS course were probably individuals judged unsuitable for further pilot, navigator, or bomb-aimer training. There was constant reallocation of such pupils throughout the system, but 'it was handled very humanely.' The impression given was that these men had been selected, not rejected.

From Victoriaville, Wise was sent to 11 EFTS at Cap-de-la- Madeleine, Que., on 19 September 1943. Both were francophone communities, but while Victoriaville was hostile – there had been a number of clashes between the townsfolk and service personnel – Cap-de-la-Madeleine was open and friendly. RCAF members had replaced civilian instructors in the elementary flying training system by now, but many aspects of the original civilian EFTS operation remained. The food was excellent, and there were individual tables with chequered cloths and attractive civilian waitresses. Link training continued, but with a difference from Wise's initial contact with that machine when he had found it 'a very specialized form of torture' which 'didn't seem to have much relationship to what we were doing in the air.' The machine was more sophisticated than in MacKenzie's day, and now there was more emphasis on navigational training, working 'blind' under a hood in preparation for the use of such aids as the radio range. The Link was now 'a very considerable test of concentration and capacity to react to new information,' and was 'more benefit ... than I think we quite realized at the time.'

His was the first course to fly the Fairchild Cornell, the elementary trainer scheduled to replace the Finch and DH Moth. Wise had yet to fly. Now 'we were thrilled and filled with anticipation ... the little Cornell ... looked enormous to me.' After the first few hours he thought 'how sweet it was, what a beautiful little aircraft.' Experienced pilots considered it underpowered, but he and his fellow neophytes flew well within its limits, never unduly stressing it, and found it very stable and easy to fly. Perhaps it was just as well that they did not overstress their Cornells, since 'in the last half of 1943 a series of wing structural failures occurred, at least six in the RCAF ... A reinforcement of the centre section main spar corrected the trouble.'[66]

After Wise's first instructor became ill he had a series of substitutes and fell behind his course. In order to keep up, he was sent off solo before he was really ready, but succeeded. As with previous courses, he was then often sent off to

practise set sequences on his own. He also received a few hours of dual night flying. The RAF's Bomber Command was very much a night-flying force, and more such training had been placed in the syllabus, even carrying it down to elementary level. In spite of Wise's awareness of flight before he enrolled, this was a new and surprising experience. 'Quite frankly, I didn't think it could be done. It hadn't dawned on me. The first time I was taken up with my instructor and I saw the red and blue lights, I found it very beautiful ... But also I thought that this was pretty ridiculous. The discovery that you could land at night, that was a remarkable discovery. It never ceased to be a somewhat shaky experience until I was well past the wings stage.'

Wise asked for and got twin-engine training – he would probably have been assigned to it anyway – and was posted next to 9 SFTS, Centralia, Ont., in November 1943. There he trained on Anson IIs. It took some time to adjust to handling two engines, and he caught the flu, 'missed some vital hours of instruction ... and came out of the hospital with a temperature to take what was in fact a washout check' to provide formal justification for removing him from pilot training. After a quick flight, to Wise's surprise the instructor sent him off solo. 'To have this verdict from the Chief Flying Instructor, who I guess couldn't have given a damn that I'd had a temperature of 102 or something, was enormously heartening. I went off and did my solo right then, ill. When I came back ... I was thrilled and so was the flight. They were all out in front of the flight shack with a cake for me. I leaped out of the aircraft and caught the D-ring of my parachute on the door as I came out and it opened ... There's a lovely picture of the flight rolling about and laughing like hell, and me with this parachute trailing behind. It was a wonderful day in my life you know. Then I went back to hospital.'

Wise's service flying course was twenty-one weeks long, compared with MacKenzie's twelve. Included in that lengthened span were more night exercises and long navigational flights. Link training continued as well. It was increasingly complex, but 'most of us regarded the Link training as a diversion from what we were really about, which was accumulating lots of hours in the air.'

These hours were not spent dashing around the skies. While MacKenzie was plotting bridge-loops in 1940, one of his contemporaries, Arthur Wahlroth, was learning that 'the aerobatics I had been painstakingly perfecting [at EFTS] came to nothing, for the next phase of training was on the gentlemanly Avro Anson.'[67] Three years later, Wise also found that 'with your ordinary run-of-the-mill Anson II there isn't a hell of a lot of playing to do.' He did have some freedom to experiment in the air. 'We were permitted to do everything to that aircraft that it was stressed to take and to fly it right to the extent of its capabilities and not one inch beyond. That's what we did. Remember, we were dual pilots and we were trained to fly accurately, straight and level, and to fly precisely. We knew we would be flying bombers, we'd be running a crew with navigators, wireless operators, so precision was our emphasis.' In contrast to MacKenzie's hallmark of 'freedom and bravado' in the early single-engine schools, Wise and his peers were conditioned to fly with precision and 'a sense of professionalism. Not military professionalism, really professionalism as a pilot. The sense that you

were training for a highly skilled kind of occupation. That's not a proper thing for a service person to feel, and yet it's true. I think one of the effects of the BCATP was to create that sort of sense of professionalism; pride in being a pilot. Their indoctrination reinforced that. The indoctrination had less to do with the RCAF as a fighting unit than it had to do with the creation of an aircrew spirit in which there was a high level of professionalism.'

Wise had close to 250 hours logged on graduation. He found his wings parade both an exhilarating and unusually sobering experience, for the ever-present reality of training casualties intervened (though the BCATP fatal accident rate had declined from 1 in 11,156 hours of flying in 1940-1, to 1 in 20,580 hours in 1943-4).[68] About two hours before the parade he took a last flight with his instructor.

> We were approaching the circuit and we could see an Anson taking off. We heard the controller say something, some word of warning, and there was a collision between the aircraft taking off and an aircraft going around again ... I said to my instructor, 'look at the pieces of paper.' He said, 'that's aircraft.' Those two aircraft with four people aboard, two instructors and two students, went down ...
>
> They were all killed ... Whenever there's a fatality on a flying station, there is a certain atmosphere, and so it was within that context that the wings parade took place. So part of my memory of getting my wings is of those four fellows. On the other hand, when we left the station I was wearing sergeant's hooks and my wings, and I felt that everybody in the world was looking at me.

Every new pilot graduated as a sergeant, and those who were selected for commissioning – most of them were as a result of the 1942 Ottawa Conference – were informed a few days later. Wise was commissioned, receiving no preparation or instruction for this new status. He merely put on the uniform. When he received his commissioning scroll he 'read it very carefully,' for he was unsure of what it entailed. Fortunately, he was next sent for commando and local defence training on a course run by army NCOs at 1 Aircrew Graduates Training School, Maitland, NS. By now, in mid-1944, excess aircrew were clogging the system and courses such as this took up some of the slack. Here he got his first ideas of officer responsibilities. The station had a small officer complement, and from them the students received instruction in what it was like to be an air force officer and to be an aircraft captain in an operational situation.

All aircrew trades were at the school, not just pilots, and they were already aware that even if they got overseas or to an OTU in Canada or Great Britain their chances of reaching an operational squadron were 'very small.' In the event, most of Wise's fellow students did go overseas after leaving the school. Few, if any, got on operations. The rest languished in advanced flying units and other training establishments further down the aircrew pipeline. Wise himself was posted to 2 Air Navigation School, at Charlottetown, PEI, where he served for the rest of the war as a staff pilot, flying aircraft in which trainee navigators practised their art. Released from the RCAF in October 1945, Wise went to university, followed an academic path, and held the post of Director of History,

Department of National Defence, from 1966 to 1973. He is the author of the first volume of this history, *Canadian Airmen and the First World War* (Toronto 1980).

In a very real sense, flying is always an 'operational' situation, pitting the airman against an alien element in a battle which may easily be as fatal as one against his fellow man. But service terminology uses the word 'operation' to mean combat against a human enemy. In that sense, Wise never became an operational flyer and thus never experienced the final stage of combat flying training in an operational training unit. MacKenzie, when he eventually went overseas in 1943, did. By that time he could have attended a fighter OTU in Canada, something not possible when he graduated from SFTS in April 1941. OTUs were the last and, for reasons to be explained, least effective part of the aircrew training system to be put into place.

During the First World War and throughout much of the interwar era there had been only moderate differences between the handling and performance of training aircraft on the one hand and operational machines on the other. The improvements that characterized the latter could be mastered at a single step without undue difficulty. Aircrew could, and did, move directly from a service flying training school or its equivalent to an operational squadron. Pilots and observers were expected to complete their training by learning on the job under the supervision of experienced flight commanders and the more senior aircrew.

However, the great advances in aeronautical design that marked the mid-1930s meant that the technological gap between training and operational flying increased substantially and that much greater mental stresses were imposed in successfully piloting and navigating the newest machines. For example, a man who had learned to fly an Avro Tutor, the RAF's standard trainer of the early and mid-1930s, could easily bridge the gap between it and the Gloster Gauntlet, still the commonest fighter in 1937. Both were open-cockpit biplanes, fabric-covered, with the wing loading of the latter being only half as much again as that of the former. Even the heavy night bombers of the time, such as the Vickers Virginia and the Handley Page Heyford, had open cockpits. Indeed, the Virginia's wing loading and performance were almost identical to those of the Tutor; it was much bigger, of course, and boasted two engines. The Heyford, which remained in first-line service until 1939, had a performance very similar to that of the Gauntlet. But the Hawker Hurricane – the first of the monoplane, eight-gun fighters – which entered service in 1937 had a wing loading, speed, and rate of climb very nearly triple that of the Tutor. The Vickers Wellington, which began to replace the Heyford as the RAF's heavy bomber in 1938, had a wing loading four times that of the Tutor when it was fully 'bombed-up' and, although its rate of climb was no greater, it could double the Tutor's maximum speed.[69]

The flying problems posed by these dramatic advances applied most obviously to pilots, especially bomber pilots, and by May 1938 the RAF had come to recognize that 'Training has not kept pace with the increased demands made on the fully trained pilot, due to increase in complexity of modern bomber aircraft. There is an "accident prone zone" following immediately on the arrival

of a pilot at his squadron after leaving F[lying] T[raining] S[chool]. There should be an interim stage of training between the two.'[70] This stage was provided in 1939 by the creation of fighter, bomber, and maritime operational holding units, initially called 'group pools,' to provide immediate reserves for the front-line squadrons while carrying out the needed advanced training. The nomenclature was changed to 'operational training units' in the spring of 1940.[71]

The problem of reconciling old and new technologies and training and operational flying standards scarcely existed for the RCAF. Except for the Hurricanes allocated to 1 Squadron in February 1939, the Canadians had none of the new machines and – far removed from the theatre of war – no requirement for operational training in the tactical sense. However, the climatic and topographical exigencies of Pacific coast flying, which was technically operational, posed enough of a concern that the air force found it advisable to form a seaplane and bomber reconnaisance school (equipped with Fairchild 71s, Noorduyn Norsemen, and Vickers Vancouvers and Vedettes) on the west coast. When it was decided to include landplanes as well, the school was redesignated 13 Operational Training Squadron in July 1940.[72] The squadron only trained pilots, not complete aircrews, and both machines and equipment were very different from those in use in fully operational theatres. None of the instructors had combat experience and pupils got no meaningful tactical training.

As early as December 1940, however, Air Vice-Marshal Breadner told the British air staff that the RCAF was anxious to develop a genuine operational training capability, and enquired if OTUs might be included among the RAF schools about to be transferred to Canada. Air Marshal Garrod had replied that it was current policy to retain OTUs in the United Kingdom because the RAF felt that the further operational training was removed from the operational theatre, the less effective it was. That was certainly true, and the principle therefore a sound one. As Garrod noted at the time, however, the pressure of operations on air space over such a geographically restricted base as Britain might eventually make it necessary to shift some OTUs out of the theatre.[73]

In the event, non-operational circumstances were about to force the air staff's hand. Only ten days after Breadner's meeting with Garrod, the Air Ministry's special representative in the United States, Air Commodore J.C. Slessor, signalled the chief of his air staff about the problems of ferrying 'large numbers' of American-built operational aircraft across the Atlantic. He felt it would be necessary to find the crews for these machines from UK Home Commands ('Royal Canadian Air Force may be able to help out with some administrative personnel but instruct[ors] staff pilots and bulk of ground personnel must be found by R.A.F.') who would need additional training on American types before they could attempt the North Atlantic crossing. That, in turn, would require 'an organisation capable of 2000 hours training a month with say 40 aircraft of types proportionate to U.S. deliveries.'[74]

Someone in the air staff found a more economical answer. An unsigned minute of 7 January 1941, attached to Slessor's signal, noted that 'the best way of meeting it [the need for such an organization] will be to form one or two O.T.U.'s in Canada.' Selected graduates of the BCATP 'would go through these

O.T.U.'s and do the full course. On completion each individual would be available for one ferrying flight ... We suggest that both the interim training organisation and the O.T.U.'s should be run by the R.C.A.F. We understand that Air Vice Marshal Breadner is in favour of establishing O.T.U.'s in Canada quite apart from this ferrying aspect.'[75]

This advice was taken and, since the ferry route was a maritime one, it made sense that the first RAF OTU to be transferred specialize in maritime reconnaissance. No 31 OTU crossed the Atlantic to Debert, NS, in May 1941 and was able to start training, using Lockheed Hudsons, in August. Because RAF Ferry Command, as the Atlantic Ferry Organization became in July (see Appendix D), was so hard pressed for crews and the airfield at Debert was still unfinished, the full operational training course was held in abeyance until the end of the year. The unit concentrated on preparing pilots, observers, and wireless operators (air gunner) for their transatlantic flights with the emphasis on the instrument flying, navigation, and communications skills necessary for this trip.[76]

Operational training proper commenced in December, with a syllabus which provided for a twelve weeks' course for pilots and wireless operators (air gunner) and eight weeks for observers as the training was broadened to include cross-country flying and navigation, bombing techniques, photography, and 'fighter affiliation' duties – defence against enemy fighter attacks and co-operation with fighter escorts. As each course finished, those crews considered competent to fly the route overseas were posted to Ferry Command at Dorval and subsequently were assigned to fly themselves overseas; the others, with the exception of those posted to Home War Establishment squadrons and those who simply failed the course, were sent to the United Kingdom by sea.[77]

The desire of the British air staff that OTUs should be sited in physical proximity to operational areas was more than realized in No 31's case on 20 April 1942, as 'the Station first became operational.' Upon 'notification of a submarine in the Bay of Fundy, bombs were obtained from 16X [Explosive Depot] and two aircraft were sent in search of it.' The sorties may have been fruitless, but the operational environment they created was invaluable and the Canadian-based trainees were getting experience probably every bit as realistic as that offered by UK-based OTUs.

> On the 20th and following days at least three aircraft were sent daily to Dartmouth where they were bombed up and carried out exercises as ordered. Sixteen aircraft [out of 74 on strength] were fully operational for these purposes.
>
> This enabled actual operational patrol practice to be given to the pupils, but some difficulty was found in finding staff pilots to accompany them in view of the shortage of staff for the intensive training already in progress on the Station.[78]

A precedent had been all that was needed to establish the propriety of locating OTUs far from an operational arena. The next OTU to move across the ocean began to arrive at Patricia Bay, BC, early in August 1941, but apparently the idea of using OTUs just to train ferry crews on American aircraft had already been abandoned. No 32 was designated a torpedo-bomber OTU and equipped with

British-designed (and built) Bristol Beauforts. That meant all sorts of delays in providing aircraft and spares and the unit was unable to commence any training at all until 5 December. Even then, it was only pilot conversion training. It was hoped to start operational training with full crews by 1 January 1942,[79] but when the Japanese attacked Pearl Harbor all training activities stopped while the unit stood by for operational duties. By 29 December, when the panic had subsided and training could be resumed, the instructional staff had flown thirty-six operational sorties. As will be seen in chapter 11, they made no contact with the enemy.[80]

Nervousness over Japanese intentions and capabilities kept a striking force of Beauforts on standby at Patricia Bay for the next twelve months while Handley Page Hampdens – another British design, although some were Canadian-built – took up the slack in the training programme. A limited amount of operational training began on schedule, in January 1942, but because of slow delivery and the inevitable shortage of spares the Hampdens did not play a significant role until June. When they did come into service, accident rates were unduly high and the quality of instruction something less than it might have been. Designed as a high-altitude, medium bomber, the Hampden was faster and more manoeuvrable than most machines of the type, but it lacked dual controls, a grave disadvantage when men were being taught to dive almost to wave-top height and then launch a 1600-lb torpedo. Moreover, 'not one of the officers on the staff of this OTU has dropped a torpedo on operations from a Hampden aircraft,' reported the commanding officer at the end of 1942.[81] Nevertheless, 32 OTU became and remained the main source of crew replacement for Coastal Command's three torpedo-bombing squadrons based in the United Kingdom, 144 Squadron, RAF, 404 Squadron, RCAF, and 455 Squadron, RAAF.

No 34 OTU, formed as a light bomber unit to be equipped with Lockheed Venturas, began flying from Pennfield Ridge, NB, in June 1942. Pennfield Ridge had been vacated by 2 Air Navigation School because of the persistent rain and fog which enveloped the station, a quirk of nature which, within reason, made it a peculiarly suitable environment for crews training for operations out of the United Kingdom. But the poor weather, combined with a shortage of instructors and dual-control Venturas, and an excess of serviceability problems, led to the first course of pilots completing only 25 per cent of their scheduled flying hours during the first month of operation. When the first full crews 'graduated,' they had made no cross-country night flights 'owing to lack of dual aircraft in the conversion flight,' and had done no air-to-air firing exercises because of a 'lack of towing apparatus and also because the towing aircraft available – Lysanders – are too slow for the work.'[82] It mattered little. The Venturas were not liked by the RAF and only three operational squadrons were ever equipped with them. For the most part, those graduates of 34 OTU who were posted to the United Kingdom were processed through Boston or Wellington OTUs after their arrival there and subsequently sent to squadrons flying those types of aircraft.

The fourth and final RAF OTU to be transferred to Canada was No 36, which opened at Greenwood, NS, in May 1942 and graduated its first crews on 1

August. Like No 31, it was a coastal reconnaissance unit, equipped with Hudsons, but it seems to have had far fewer problems, a reflection of the Allies' growing strength in men and matériel. Spares for the Hudson, a well-established type in mid-1942, were readily available, and aircraft serviceability was higher from the beginning and rose steadily. Most of the instructors assigned to the unit had completed an operational tour with Coastal Command and had experience on Hudsons. Reporting on the quality of training in November 1942, the director of training at the Air Ministry concluded that 'the crews [coming from 36 OTU] are up to a very satisfactory standard in flying the Hudson, and in Navigation and General Reconnaissance work.'[83]

After the revised BCATP Agreement came into effect in the summer of 1942, all the RAF schools and OTUs already in Canada were promptly incorporated into the plan, retaining their RAF identities and designations but coming under the RCAF for administration and accounting purposes as well as flying training. Meanwhile, the arrival of the first American squadrons in the United Kingdom in May 1942, and the prospect of many more to follow, ensured that air space and ground facilities there were going to become very congested. Whatever the theoretical merits of siting OTUs in proximity to the operational theatre in which their graduates were likely to be employed, there would soon be no room to do so. A total of 127 airfields, some of them currently in use by the RAF and others still to be constructed, would be needed to accommodate the US Eighth Air Force.[84] When additional OTUs were required by the Commonwealth air forces, they had to be established outside the United Kingdom; those created in Canada would be RCAF OTUs and numbered accordingly.[85]

Paradoxically, perhaps, the first such unit established under the revised agreement was one not really needed. When 1 (Fighter) OTU, RCAF, was formed on 14 July 1942, the output of single-seater fighter pilots from OTUs in the United Kingdom was already exceeding the demand.[86] Presumably (there seems to be no direct documentary evidence) the RCAF wanted a fighter OTU to round out its own status as a complete and balanced air force,[87] and used the ready excuse that it could train pilots for the twelve additional Home War Establishment fighter squadrons approved by Cabinet in March 1942, as well as any required replacements. However, even the further squadrons in existing expansion plans could scarcely absorb more than eighteen or twenty pilots a month. The planned output of 1 OTU was forty-five pilots a month and, although that figure was never reached, during 1943 the unit turned out an average of forty a month, all trained on Canadian-built Hawker Hurricanes.[88] Its graduates were mostly shipped overseas, to languish for months in the fighter pilot pipeline or to be cross-trained as multi-engine pilots. It is easy to see now that a complete fighter OTU in the Canadian context was not justified. It used up men and matériel better employed elsewhere. The best that can be said in its favour is that it occupied a considerable number of SFTS graduates who otherwise would have been kept waiting in Canada with nothing to do. However, the decision to create an elaborate organization rather than something less ambitious – one flight in a bomber OTU, for example – was characteristic of RCAF policy in 1942. The Home War Establishment held exaggerated importance in the eyes of the air staff, for reasons discussed in the next chapter.

At the end of 1943 a new demand for pilots of single-engined, high-performance aircraft began to provide an outlet for part of the embarrassingly large surplus of such pilots building up in the United Kingdom. The RAF, faced with irrefutable evidence of the value and importance of close air support for ground forces by experience in the Mediterranean theatre, had finally, if reluctantly, come to terms with the need for a substantial fighter-bomber and rocket projectile (RP) fighter component in its tactical air forces. That would require specialized training quite different from that traditionally given to fighter pilots, although the ground-support experts would still need a competence in air-to-air combat techniques. In June someone suggested that 1 OTU should concentrate on turning out pilots for 'Army support,' but the British authorities foresaw problems with that. Such specialization would be 'undesirable ... at present, [because] it would result in having the whole Army Support Canadianised.'[89] Instead, 'the Army Support fighter role should be known to all Day Fighter Squadrons' and Fighter Command preferred to 'include a little Army Support in all the Spitfire O.T.U.'s and considerably more in the Hurricane O.T.U.'s' As for the graduates of 1 OTU, those 'who have not already served in a Canadian Squadron in Canada, should be split among the [UK] O.T.U.'s and be given one month's acclimatisation course of 25 hours flying. This would have the advantage of giving the Canadian O.T.U. pilots the latest O.T.U. instruction and would also ease the maintenance troubles of each O.T.U. by diluting the intake.'[90]

The RCAF translated these suggestions into another sixteen weeks of OTU training as the syllabus was extended to encompass the mastery of air-to-ground rocketry and dive bombing. 'As a temporary measure ... "the course is to be extended to 12 weeks with the addition of training in the use of Rocket Projectiles as soon as equipment is available" ... In addition a course of 4 weeks duration which will include advanced tactics ... is to be added.'[91] Two weeks of this advanced course were to be spent at Camp Borden, discovering on the ground how armoured formations were equipped, organized, and operated and getting a worm's eye view of the possibilities for close air support, and two more weeks at Greenwood, NS, on air-to-ground firing, low-level, cross-country formation flying, and – ominously – escape and evasion exercises.[92]

The reprieve was brief. Although casualties on fighter-bomber and RP fighter squadrons were to prove heavy during the first few months of the northwest Europe campaign, such was the surplus of trained fighter pilots in the system that by August 1944 the Air Ministry would accept no more from Canada. The Home War Establishment could absorb only six replacements a month. Air Marshal Robert Leckie (who succeeded Lloyd Breadner as Canadian chief of the air staff on New Year's Day, 1944) searched desperately for a way to keep the fighter OTU open, but eventually had to admit that 'replacements for our W[estern] H[emisphere] O[perations] Squadrons do not justify retention of the school even on the smallest possible basis.'[93] No 1 OTU was closed on 28 October 1944.

By that time much of the training organization had closed down. In October 1943, when the Supervisory Board of the BCATP at its regular monthly meeting had considered an Air Ministry request for a further expansion of the plan to train an additional 70 pilots and 136 navigators every two weeks and another 117 air

bombers every six weeks, Sir Patrick Duff, the British deputy high commissioner, had astounded everyone by indicating that the British now wanted 'a temporary standstill in the arrangements' while they 'recalculated' their needs.[94] Then, in December, came news that 'the United Kingdom Air Ministry has now advised that the output of Pilots from the [existing] combined training can be reduced.'[95]

Pilots were the very core of the plan, and it was becoming clear that the British had only the vaguest idea how many aircrew they actually had on hand, how many were in the training stream, or how many were now needed. They had, up to that point, been working on the reasonable principle that the more the plan could produce, the better it would be, and that they could not have too many. However, a quick review now revealed that not only could they have too many, but they actually did so. The nearly complete air superiority that had been established meant that casualties were now running at much lower rates than had been forecast, and the *Luftwaffe* was getting progressively weaker. 'Overlord' – the invasion of northwest Europe – was still to come, but there seemed little likelihood that casualty rates would rise again.

In February 1944 Harold Balfour, the British undersecretary of state for air, and Sir Peter Drummond, the RAF's air member for personnel, were dispatched to Ottawa to negotiate major reductions in output. It was a ticklish business, involving assessments of the impact on the Canadian economy, on public enthusiasm for prosecuting the war – still far from won on the ground – and on the morale of men in, or about to enter, the aircrew training flow. However, after much thrusting and parrying with the Canadian government, an agreement was reached to cut back the plan by some 40 per cent over the next year.[96] Probably the only event which could have brought about an upward revision would have been the appearance of a new and exceptionately devastating air weapon on the German side. Even the new rocket and turbojet aircraft that the Germans began to use failed to inflict the damage they might have done because of the success of the Allied combined bomber offensive.[97] Hence the demand for new aircrew continued to decrease. On 27 June 1944 Drummond wrote to Air Marshal Leckie admitting 'that we have gone as far as possible in extending courses and arranging special courses and that if further surpluses occur ... then we can no longer afford to hold the surplus but must transfer it to those categories where it can be readily used, or even to ground duties in or outside the air forces ...'[98]

Power and Balfour had made their 40 per cent cut on the basis of an RCAF component of forty-seven squadrons for the war against Japan, which would still have to be won after the victory in Europe had been achieved. However, the government was quietly cutting back on the proposed contribution to the Pacific war, and it was clear that there was already enough RCAF aircrew for that, too. There were still some commitments to be met in training RAF men, but the other dominions no longer needed Canadian facilities for their own reduced production. On 19 October 1944 the government decided that the plan would be wound up at the end of the current agreement, which extended to 31 March 1945. All RCAF intakes for courses which would not be completed by that date were forthwith cancelled. Those students already in the training stream and past the

ITS stage were to complete their courses, but the ITS men and 4200 seventeen-year-old pre-entry aircrew candidates in the buffering pool were promptly discharged for subsequent enlistment (either voluntarily or compulsorily) in the army, which still had a desperate need for the kind of physically A-1 and relatively well-educated men the air force had been so carefully hoarding.[99] Australia and New Zealand stopped sending pupils to Canada in October 1944 and concentrated instead on supplying their own forces in the Pacific; their graduates returned home except for the few still needed to replace wastage in Article 15 squadrons in Europe.[100]

The British Commonwealth Air Training Plan in Canada was brought to an end in March 1945 having graduated 131,553 of the 159,340 pupils who had begun training. The total included 42,110 RAF (including Allied nationals), 9606 Australian, and 7002 New Zealand aircrew; RCAF graduates numbered 72,835 out of 91,166 entrants, 25,747 of them pilots, 12,855 navigators of one kind or another, 6659 air bombers, 12,744 wireless operators (air gunner), 12,917 air gunners, and 1913 flight engineers.[101]

We will never know how many casualties in the air war might have been avoided if training standards had been higher. But one might equally well ask how many more might have been incurred, both in the air and on the ground, if insistence on higher standards had led to reduced output. And what would have been the effect on the progress of the war as a whole if limitations in the supply of aircrew had restricted the strategic bomber offensive, handicapped anti-submarine operations in the North Atlantic, or limited air support to ground forces in the Italian and northwest European campaigns? These questions cannot be answered. It is clear, however, that despite the imperfections of early BCATP training, the sheer quantity of graduates played a significant part in establishing Allied air superiority at a time when *Festung Europa* seemed impregnable to ground attack. The quality of German aircrew declined during the war (especially during the last two years) while the standard of BCATP graduates rose steadily without a corresponding loss of numbers.

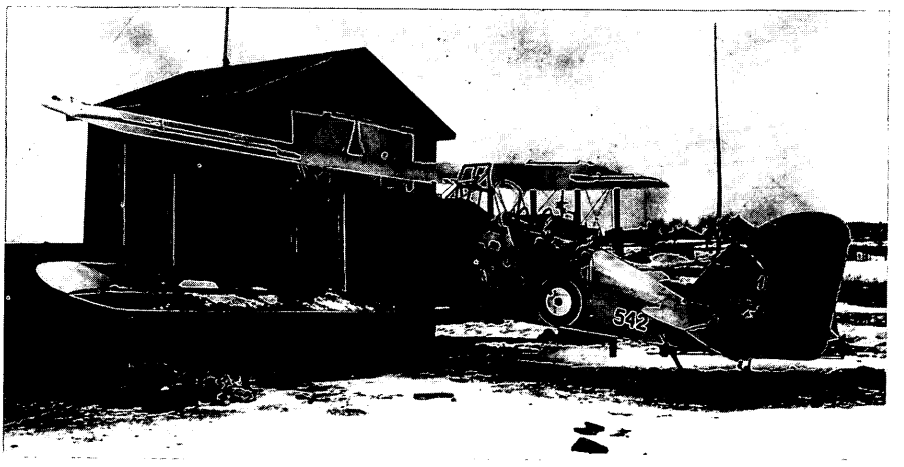
PART THREE

The Air Defence of Canada, 1939–45

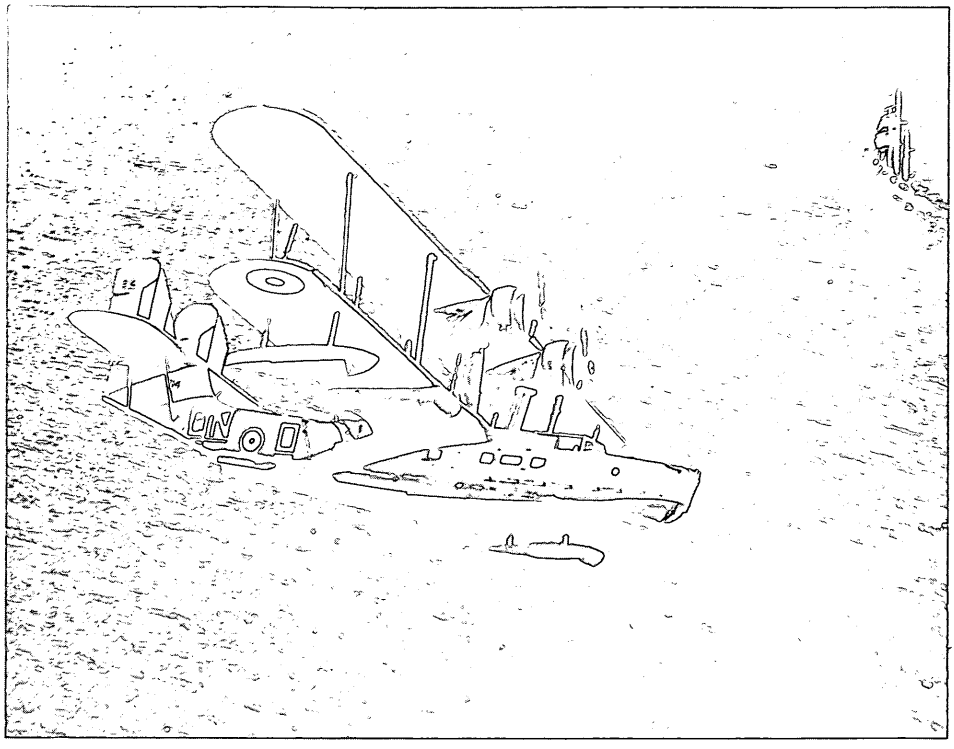
Ian Mackenzie, former minister of national defence, about to board a Grumman Goose, 1939. (PA 63538)

Groundcrew of 8 (BR) Squadron servicing one of their Northrop Deltas at Sydney, NS, during the winter of 1940–1. The Deltas were replaced by Bristol Bolingbrokes, one of which can be seen to the left. (RE 20608-1)

The departure of 110 (AC) Squadron for overseas, RCAF Station Rockcliffe, Ont., in the spring of 1940; left to right, K.S. Maclachlan, deputy minister of national defence (air); Air Vice-Marshal G.M. Croil, chief of the air staff; Prime Minister W.L.M. King; Squadron Leader W.D. Van Vliet, officer commanding the squadron; N. McL. Rogers, minister of national defence; and Wing Commander A.J. Ashton. (PA 63634)

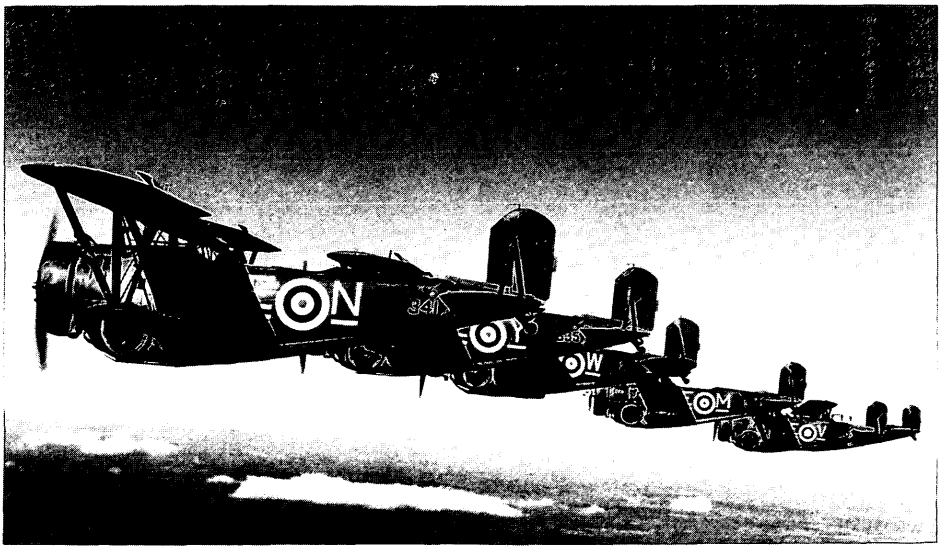


To all intents and purposes a First World War aeroplane, this Westland Wapiti was still being used operationally with 10 (BR) Squadron at Halifax, NS, March 1940. It is protected by a nose hangar, which kept the engine dry and warm in winter. (PA 141379)



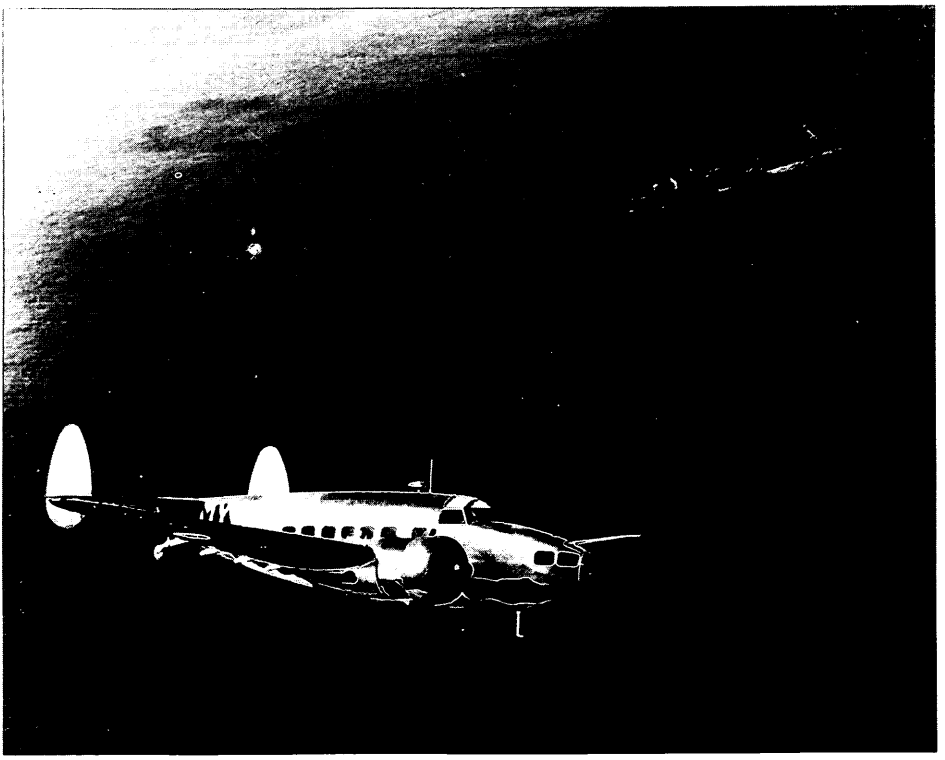
A Supermarine Stranraer of 5 (BR) Squadron, over an east-coast sailing vessel, 3 April 1941. (PL 2729)

A group of senior RCAF, RAF, and Ferry Command officials in Ottawa in the fall of 1941. At far left, Air Marshal L.S. Breadner; second from left, Air Marshal W.A. Bishop; at the extreme right, Air Vice-Marshal G.M. Croil; and, second from right, Air Vice-Marshal E.W. Stedman. (PMR 85-54)



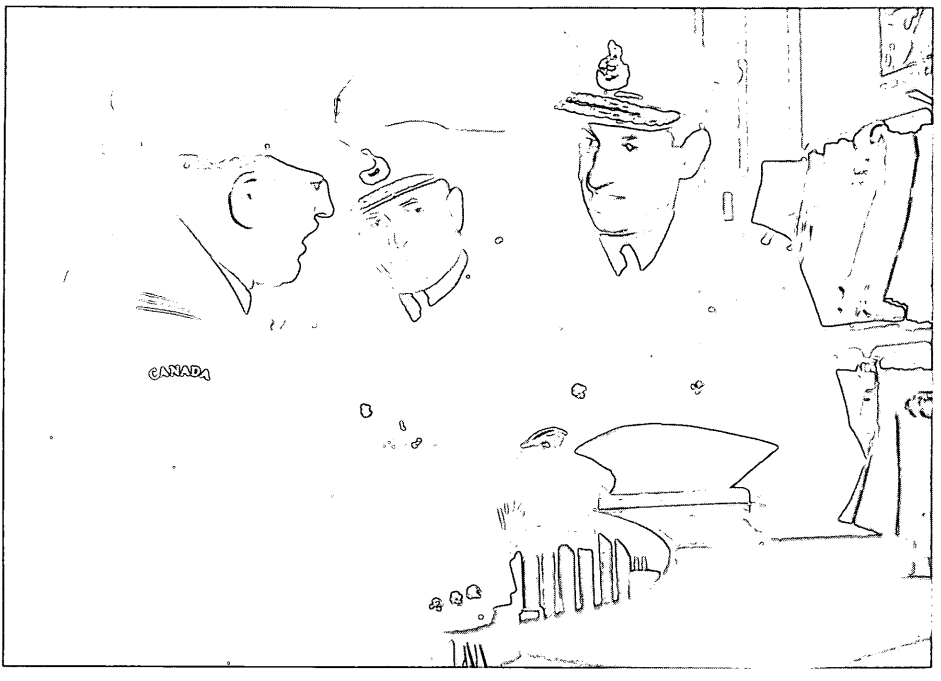
Canadian-built Grumman Goblins – 'Pregnant Frogs' – of 118 (F) Squadron, seen here on 18 September 1941, were for a time the only fighter aircraft in Eastern Air Command. (PL 5955)

Air Commodore G.O. Johnson, deputy chief of the air staff, 1941 (PA 141377)

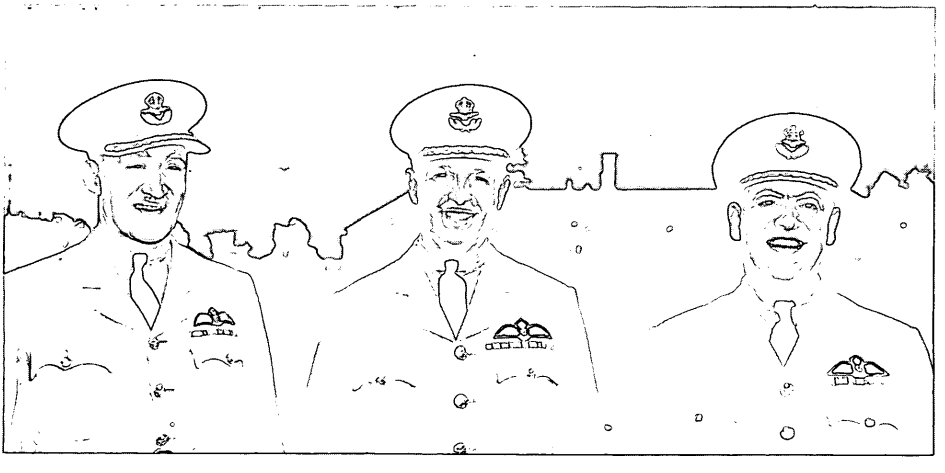


A Lockheed Hudson Mk I, the first contemporary bomber reconnaissance aircraft to be acquired by Eastern Air Command, over a minesweeper, 1940. (PL 1183)

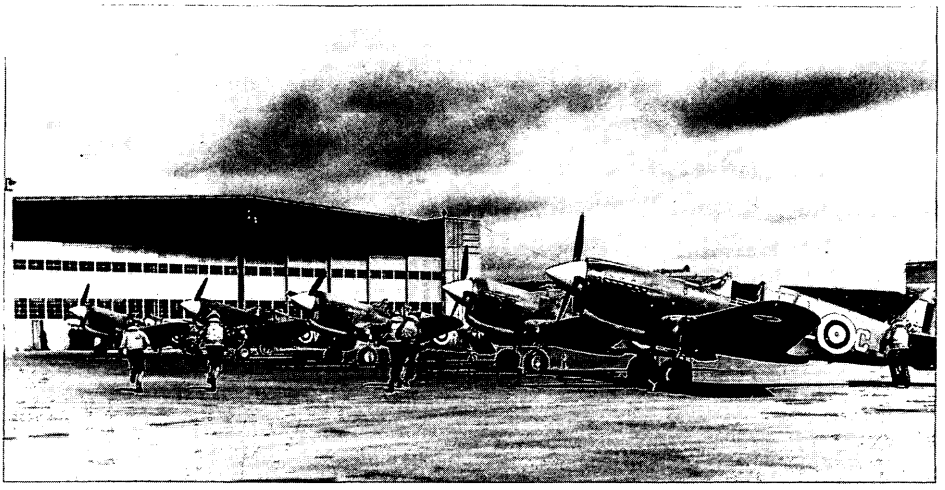
The Air Staff and other senior air officers, probably taken in the fall of 1941. Seated, left to right, Air Commodore A.E. Godfrey, deputy inspector general; Air Commodore A.T.N. Cowley, commander, No 4 Training Command; Air Vice-Marshal E.W. Stedman, air member for aeronautical engineering; Air Vice-Marshal G.M. Croil, inspector-general; S.L. de Carteret, deputy minister of national defence (air); C.G. Power, minister of national defence for air; Air Vice-Marshal L.S. Breadner, chief of the air staff; Air Commodore W.R. Kenny, air member, Canadian liaison staff, Washington; standing, left to right, Air Commodore A.A.L. Cuffe, air member for air staff; Air Commodore A.B. Shearer, commander, No 2 Training Command; Air Commodore G.V. Walsh, commander, No 3 Training Command; Air Commodore N.R. Anderson, air officer commanding, Eastern Air Command; Air Commodore G.E. Brookes, commander, No 1 Training Command; Air Commodore C.M. McEwen, air officer commanding, No 1 Group, Newfoundland; Air Commodore S.G. Tackaberry, air member for supply; Air Commodore G.O. Johnson, deputy chief of the air staff; Air Vice-Marshal H. Edwards, air member for personnel; and Air Commodore R. Leckie, air member for training. (PMR 82-152)



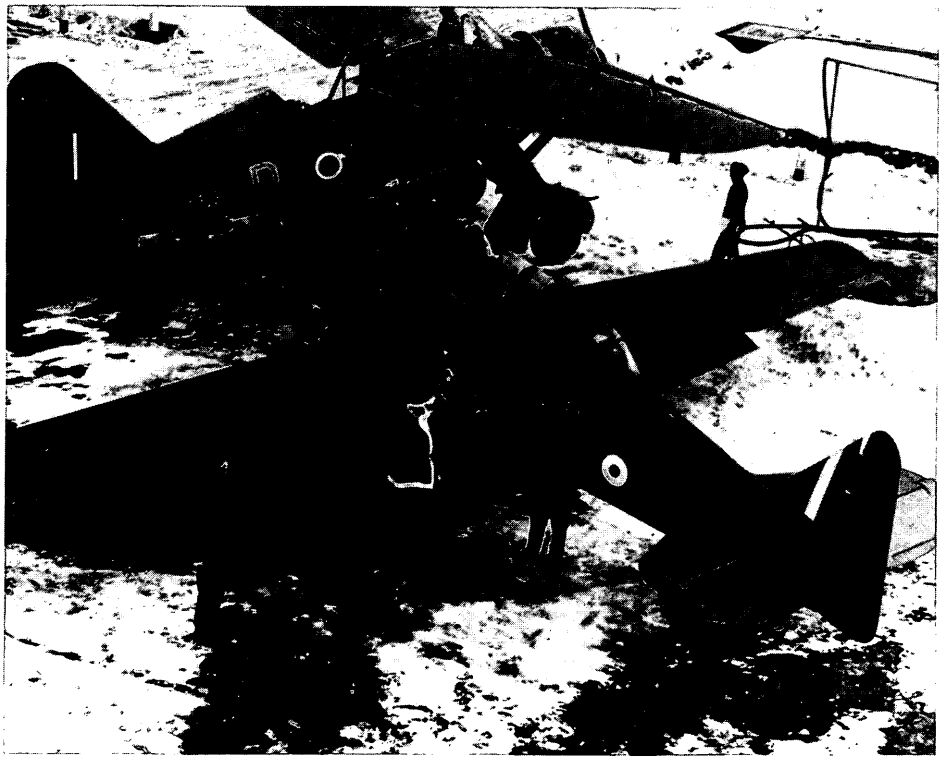
Air Chief Marshal Sir Charles Portal, chief of the air staff, RAF, at right, during a visit to 2 SFTS, Uplands, listens to Squadron Leader S.A. Green, left, while the Canadian CAS, Air Marshal L.S. Breadner, looks on. (PL 6497)



Three senior RCAF officers during a visit to RCAF Trenton, Ont., in 1941: Group Captains F.S. McGill, W.A. Curtis, and J.L.E.A. de Niverville. (PL 5754)



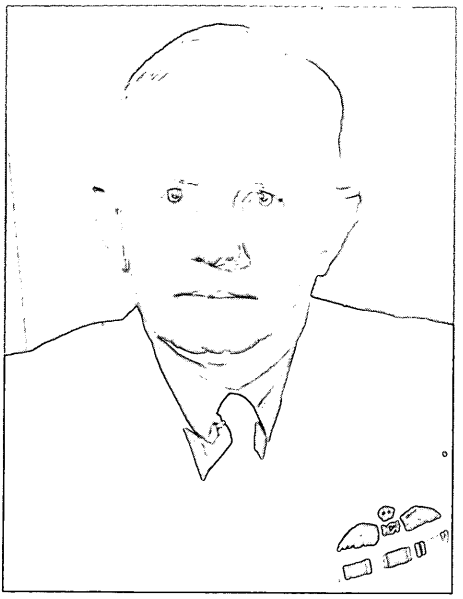
Pilots of 118 (F) Squadron 'scramble' to their Kittyhawks at Dartmouth, 4 April 1942. (PL 8353)



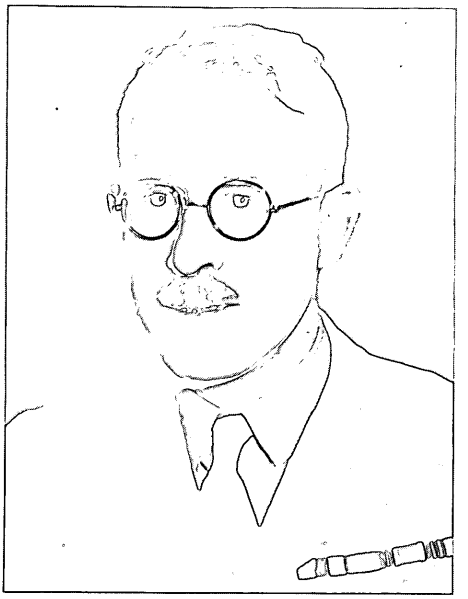
A Harvard brings Santa Claus to 1 (CAC) Flight, Saint John, NB, Christmas 1942. A Westland Lysander, which was the mainstay of all coast artillery co-operation flights, stands at the top of the photo. (AH 67-5)

Flight Sergeant Kay Russell of Vancouver at RCAF Station Rockcliffe. (PL 8963)

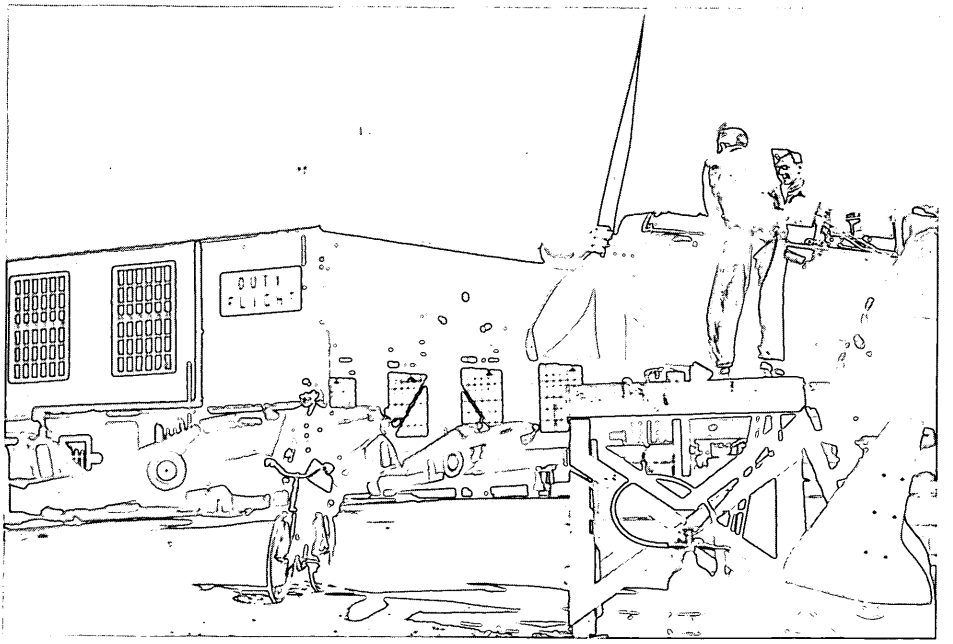
Air defence for Newfoundland: Hawker Hurricanes of 127 (F) Squadron, Gander, December 1942. Canadian-built Hurricanes were distinguished by large American propellers, which could not be capped by the spinners characteristic of British Hurricanes. (PL 14155)



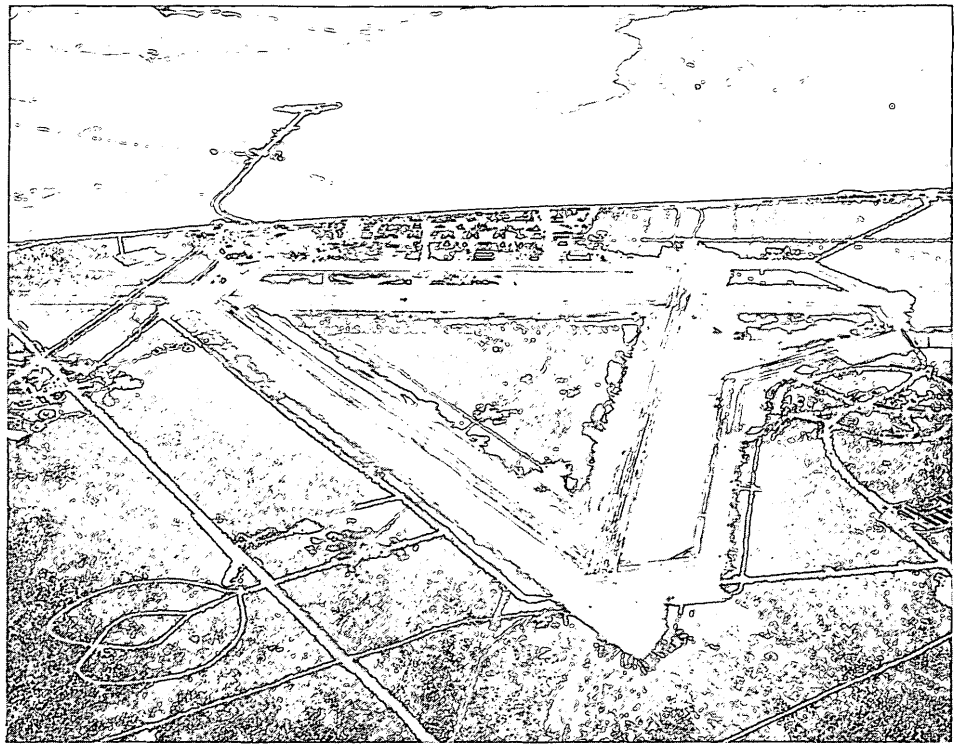
Group Captain F.V. Heakes, assistant air member for air staff, 19 January 1942. (PL6636)



Air Commodore C.A. Ferrier, air member for aeronautical engineering, March 1942. (PL 8176)



Dispatch rider cycles past mechanics working on a Canadian-built Hurricane at 133 (F) Squadron, Lethbridge, Alta, September 1942. (PL 12324)

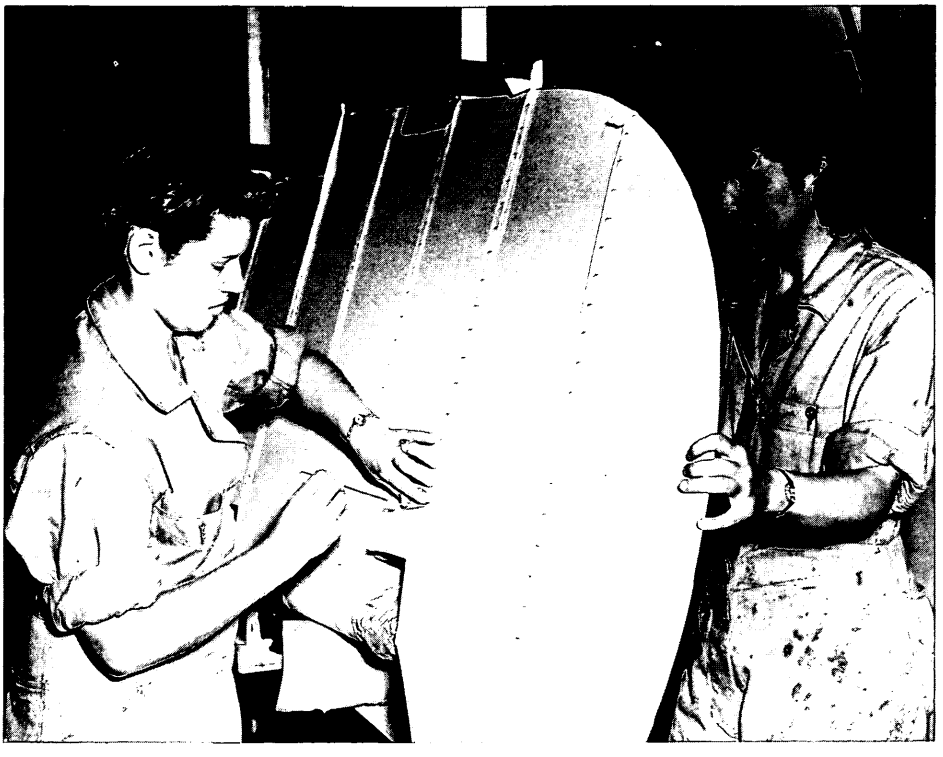


Goose Bay, Labrador, in June 1943: a key link in the transatlantic air route and an alternate field for Newfoundland-based aircraft. The RCAF establishment is at the top of the photo, that of the USAAF to the right. (RE 64-1720)

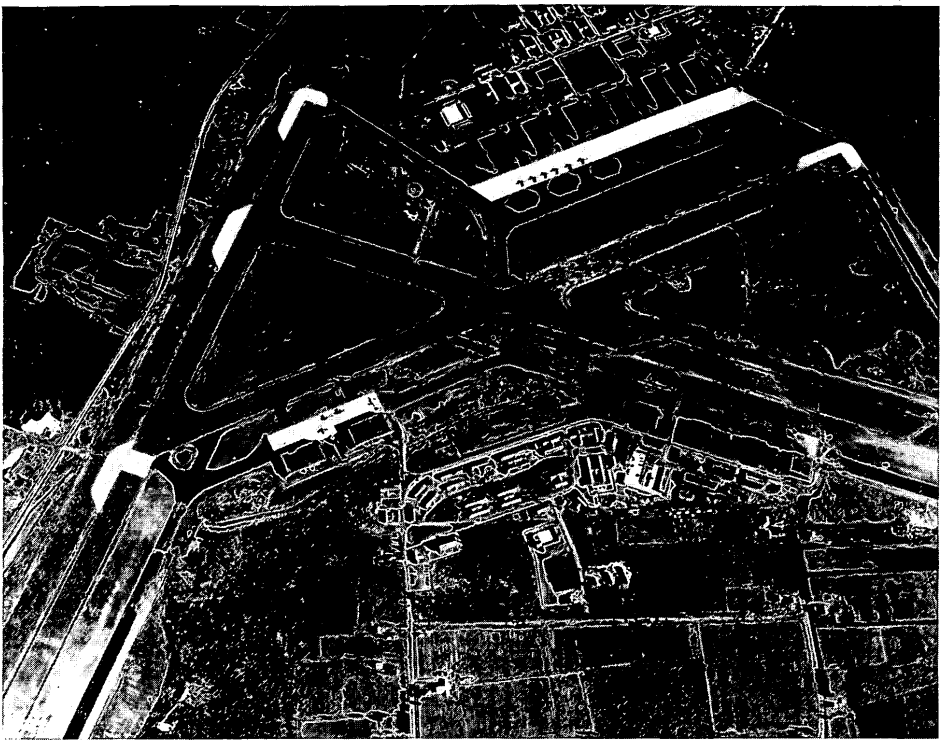
'Main street,' RCAF Station Goose Bay, Labrador, in May 1943. (PA 141356)

Children making model planes in the 'shop' class of a Montreal area school, June 1942. (PL 9479)

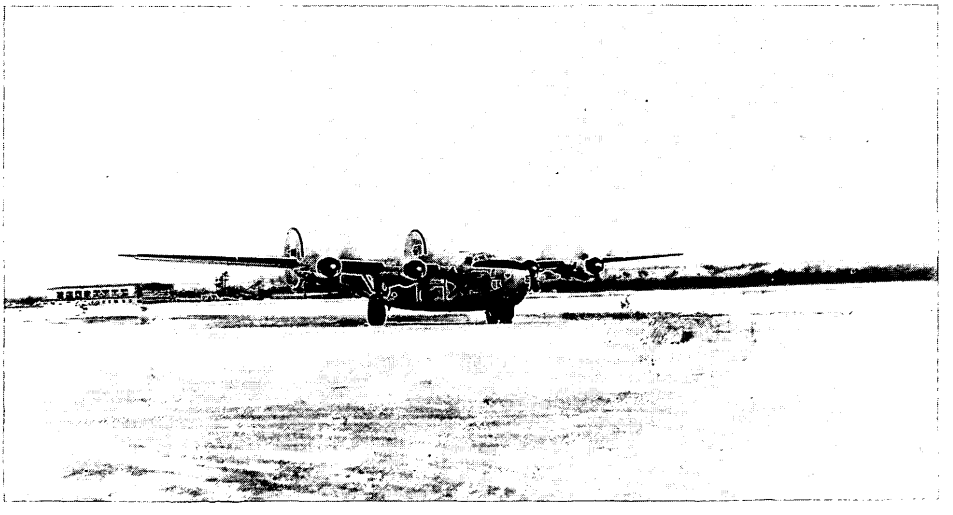
Signallers at 2 SFTS, Uplands, October 1943. (PL 21486)



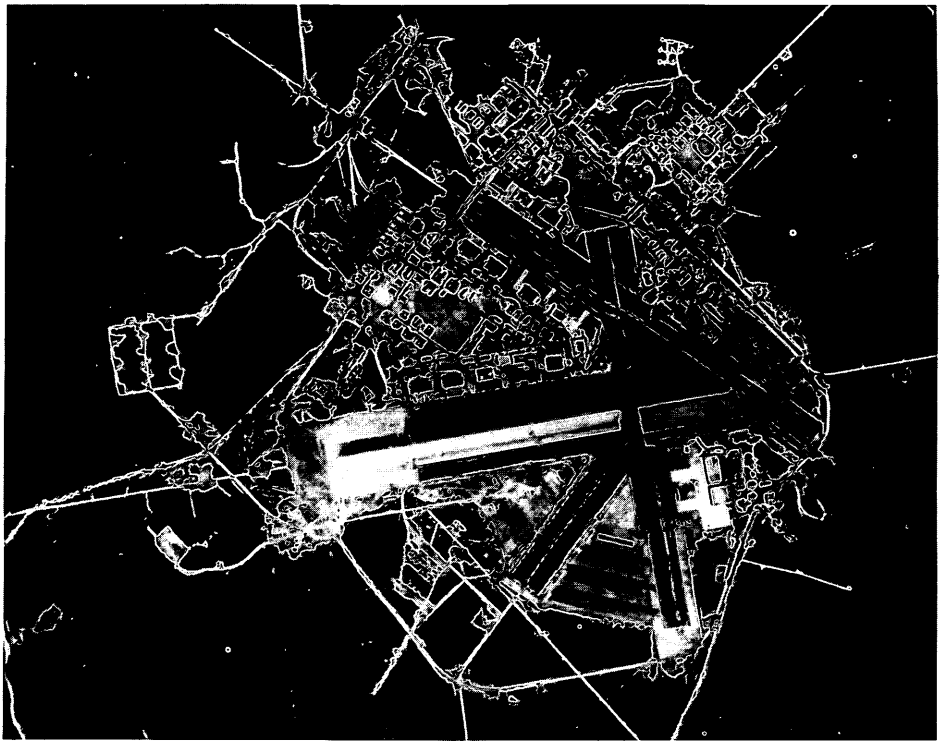
Women's Division 'Fabric Workers' stitching up a seam at 6 B&GS, Mountain View, Ont., August 1942. (PL 9847)



RCAF Station Yarmouth, the principal airfield for operations south of Nova Scotia, and the home of the Royal Navy's 1 Naval Air Gunner's School, seen here at the top of the photo. (PMR 77-208)

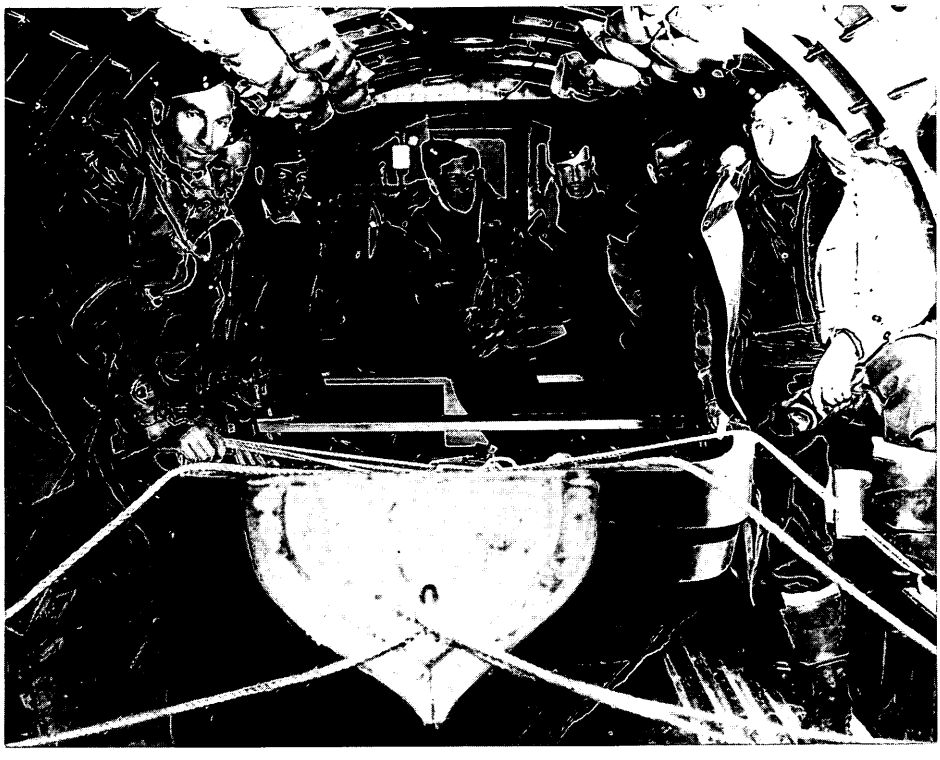


A Liberator transport of 168 (HT) Squadron, laden with mail for soldiers overseas, prepares to take off from Rockcliffe. (PL 37627)



Gander airfield, Newfoundland. The aircraft massed on the American side of the field are on their way to Europe as part of RAF Ferry Command operations. (RE 64-1578)

Whenever possible salvage crews recovered the wreckage of downed aircraft, such as this Ventura being dragged from the woods in September 1943. (PL 20868)



RCAF Marine Service ice boat and crew in the cargo bay of an aircraft, 1945. (PL 28529)

Air Vice-Marshal R. Leckie, on the eve of his promotion to chief of the air staff, January 1944. (PL 23609)

Air Marshal L.S. Breadner, as air officer commanding-in-chief, RCAF Overseas, March 1945. (PL 35325)

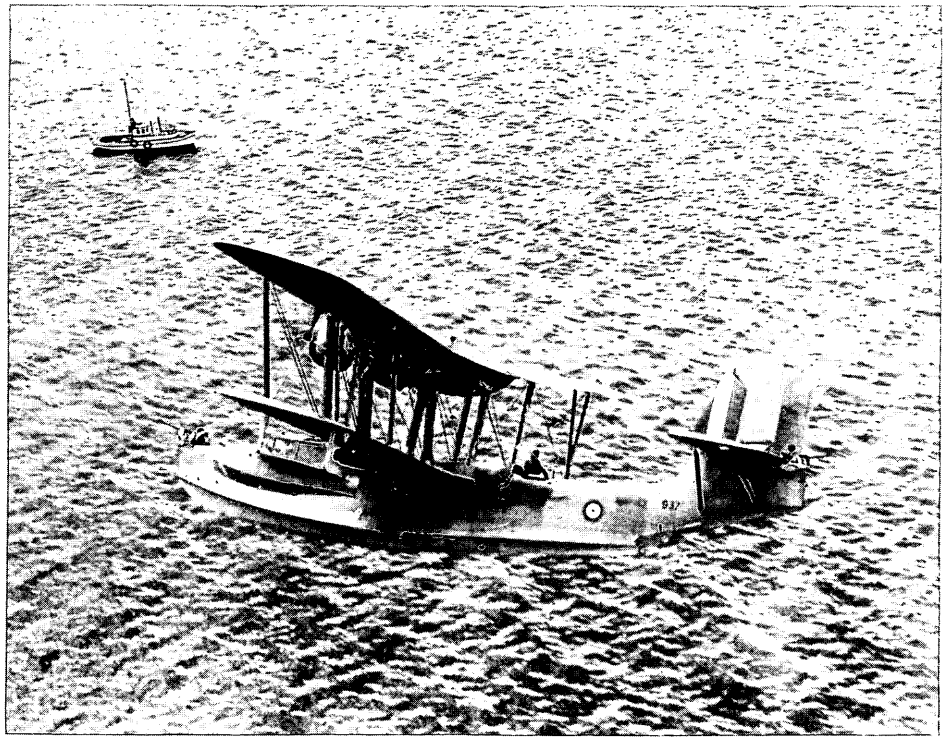
A homing pigeon about to be 'launched' from a Canso in January 1944. The use of pigeons proved a remarkably durable emergency communications system. (PL 23625)

Wartime aircraft awaiting disposal at Scoudouc, NB, June 1945. (PA 103048)

RCAF Station Alliford Bay, BC, tucked away in Skidegate Inlet, was the most westerly station in the Pacific coast air defence system. (PA 141383)

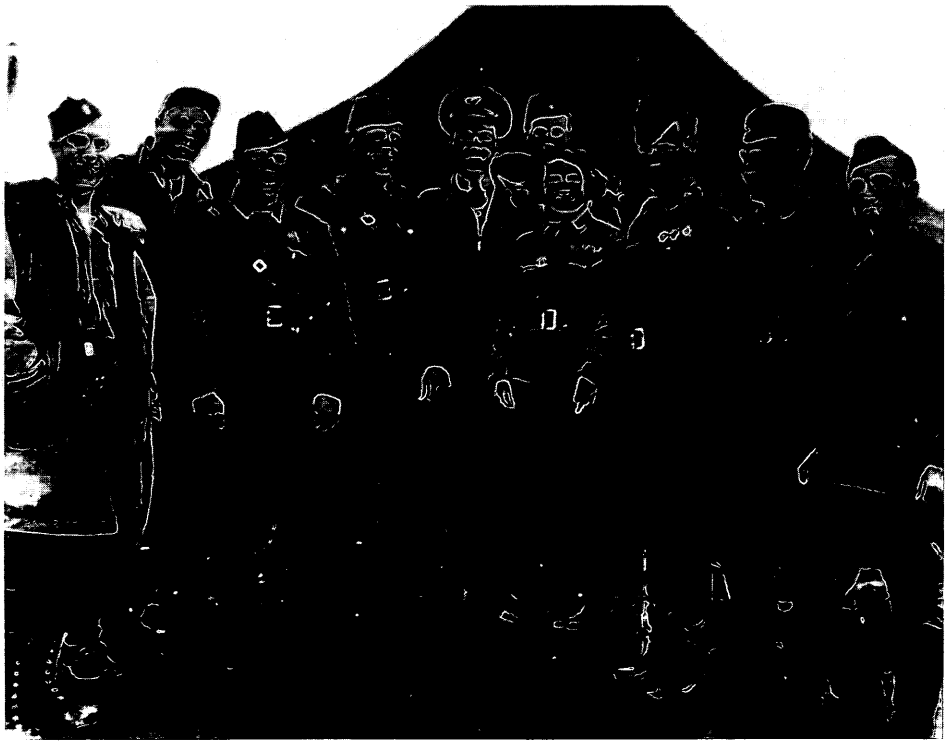
The minister of national defence for air, G.C. Power, second from left, and the chief of the air staff, Air Vice-Marshal L.S. Breadner, centre, during a visit to the West Coast in July 1941. Also present are Group Captain F.V. Heakes, assistant air member for air staff, at left, and Air Vice-Marshal L.F. Stevenson, air officer commanding, Western Air Command, second from right. (RE 13833)

Bolingbrokes of 115 (F) Squadron at Patricia Bay, BC, 28 January 1942. The gun-pack which distinguished the fighter version of the Bolingbroke is visible directly under the fuselage. (PA 140638)



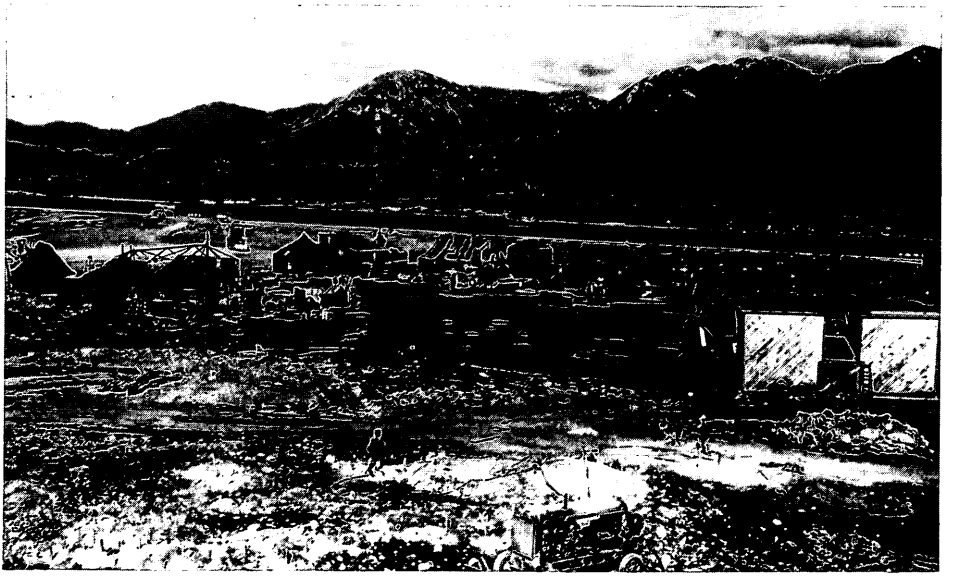
A Western Air Command Supermarine Stranraer of 9 (BR) Squadron, July 1942. All three of the aircraft's gun positions are manned, and there are depth charges under the wing. (PL 9601)

An 8 (BR) Squadron Bolingbroke, at Seward, Alaska, during the squadron's move to Anchorage, draws an interested crowd of American servicemen. (PMR 77-98)

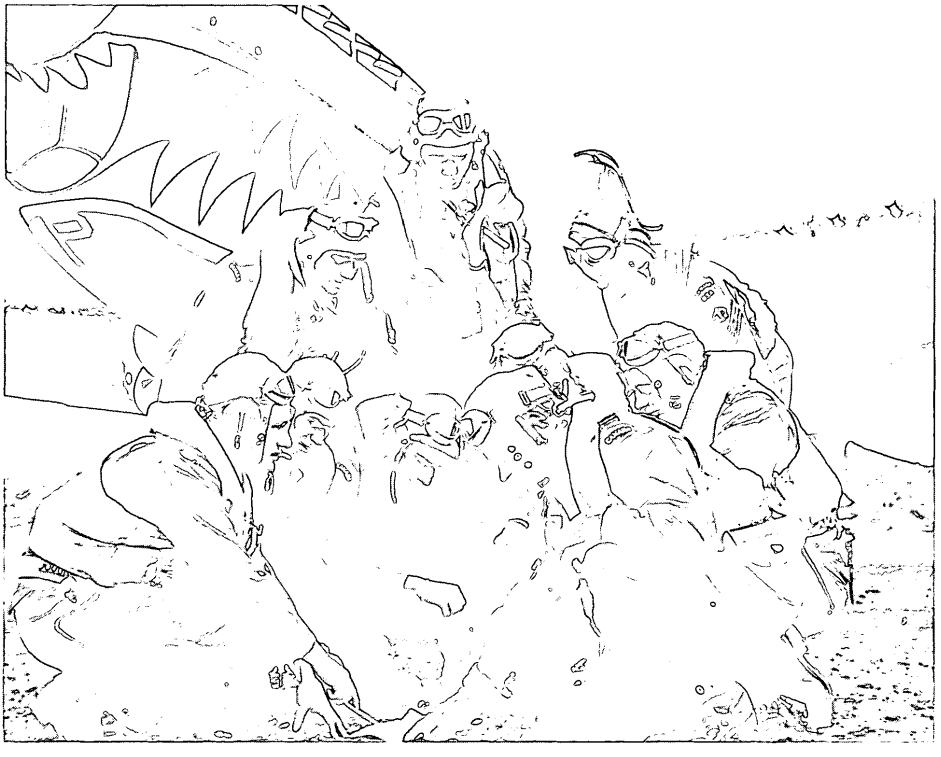


Soviet pilots engaged in ferrying aircraft to the USSR pose with allied airmen at Nome, Alaska, in 1942. (PMR 79-617)

This wartime public relations shot taken at Annette Island illustrates an aircrew's 'ready room.' Note the aeroplane on the tarmac outside. (PA 140656)



The maintenance area for fighters at Annette Island, Alaska, in September 1942. The charred skeleton of one of the tents is evidence of a recent fire. (PA 140643)

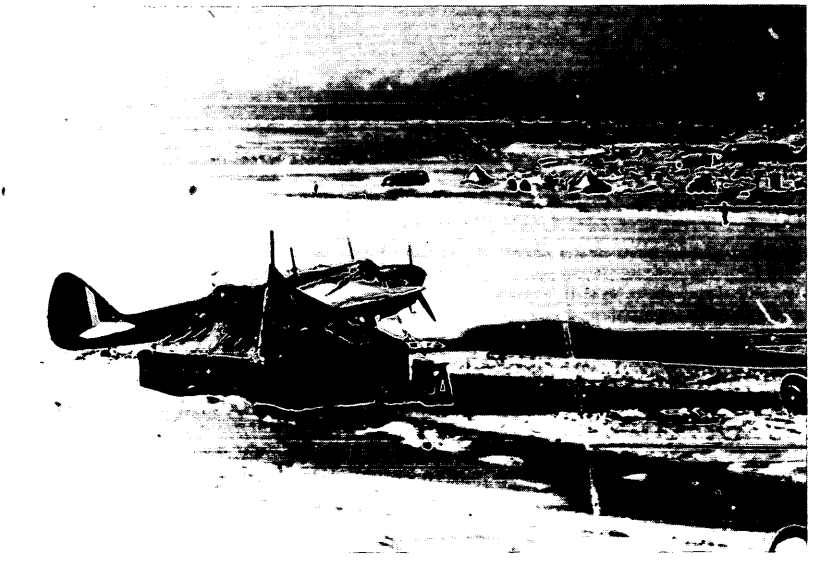


Flight Lieutenant A. Grimmons, who had flown with pursuit squadrons of the USAAF, briefing his fellow pilots of 14 (F) Squadron prior to an Alaskan sortie, 26 October 1942, with one of the squadron's shark-mouthed Kittyhawks as a backdrop. (PL 13098)

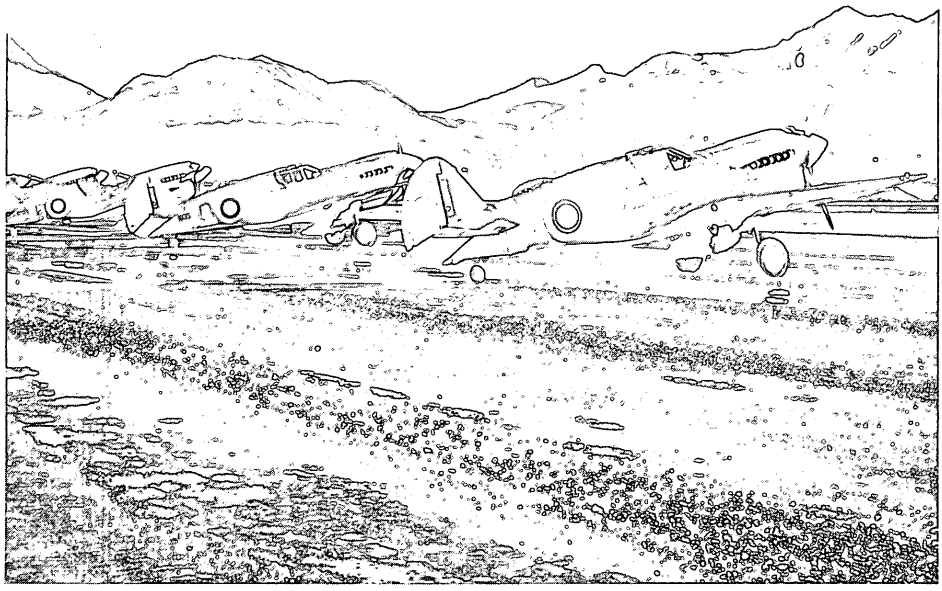
A coast watch detachment from RCAF Station Alliford Bay, BC, in the early stages of construction, September 1942. (PA 141360)

Air Vice-Marshal L.F. Stevenson, seen here as an air commodore while commanding the RCAF overseas, was recalled from Britain in January 1942 to take charge of Western Air Command, a post he held until June 1944. (PL 4311)

Squadron Leader K.A. Boomer, of 111 (F) Squadron, the pilot who shot down a Japanese Zero floatplane over Kiska on 24 September 1942, the only aerial victory by the Home War Establishment and the only victory by an RCAF squadron against the Japanese. Boomer was subsequently killed in action over Northwest Europe, 22 October 1944. (PMR 76-596)

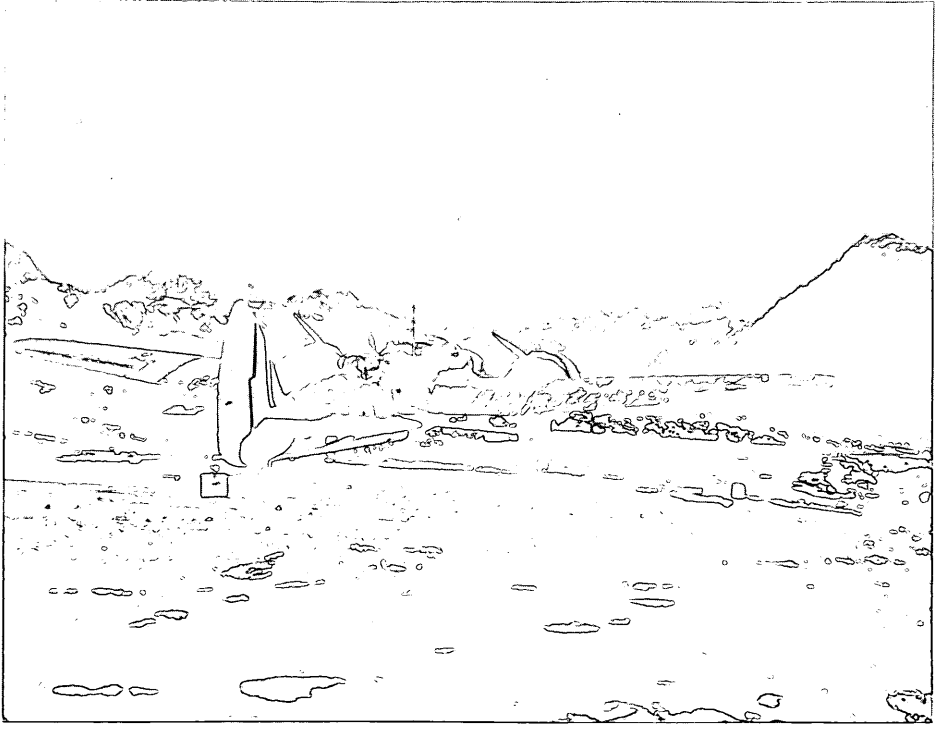


An 8 (BR) Squadron Bolingbroke and work tent at Nome, Alaska, in 1942, the northern-most station used by an operational RCAF squadron during the war. (PMR 79-465)



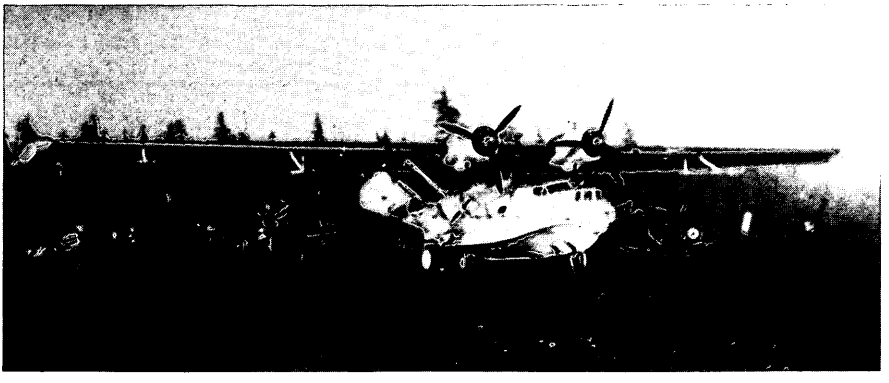
Kittyhawks of 111 (F) Squadron at Kodiak, Alaska, ca 1942–3. (PMR 80-197)

Wing Commander E.M. Reyno, officer commanding 115 Squadron, and Flight Lieutenant R.A. Ashman, strolling along one of Annette Island's notorious duck-boards. (PMR 79-568)



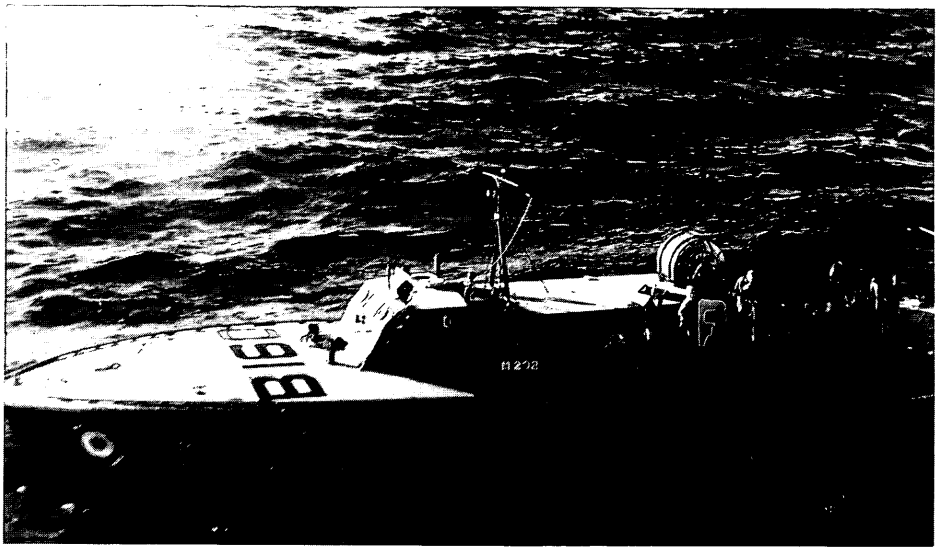
An RCAF Bolingbroke on Annette Island during the winter of 1942–3. (PMR 79-778)

This smiling member of the Aircraft Detection Corps is busy – for the moment at least – with more down-to-earth matters, June 1943. (PL 17189)



A Canso 'A' and Kittyhawks of 14 (F) Squadron waiting out the fog at Yakutat, March 1943. (PMR 76-382)

Armourers of 111 (F) Squadron servicing the .5-inch guns of a P-40 at Kodiak, Alaska, June 1943. (PL 13129)

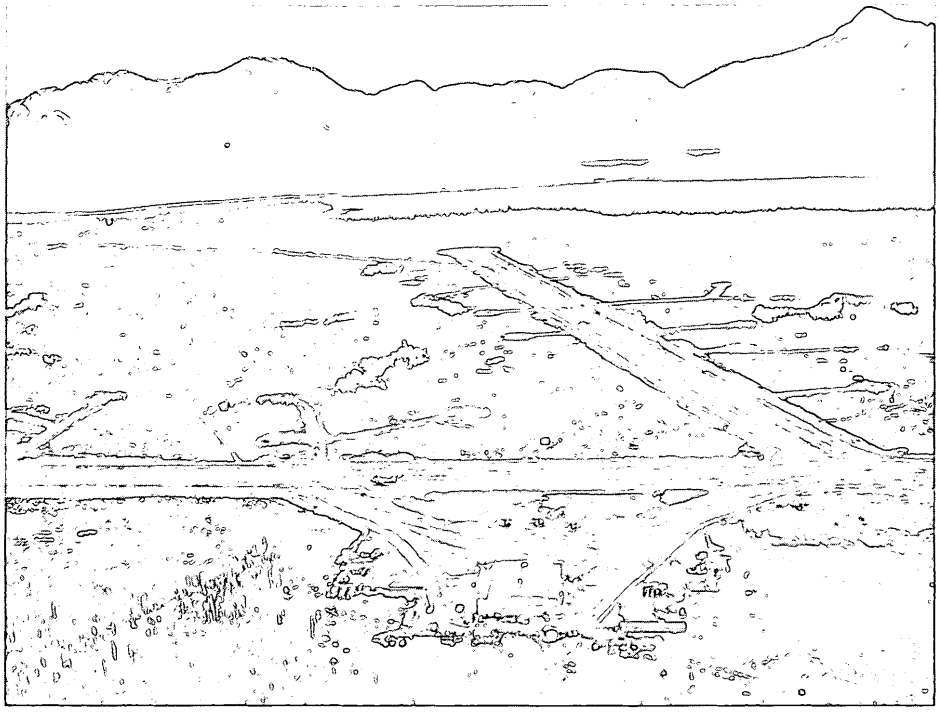


A Marine Service rescue launch, picking up the crew of a downed Anson off the West Coast in August 1943. (PL 23075)

Kittyhawks of the short-lived 132 (F) Squadron at Boundary Bay, BC, 1943, along with Bolingbrokes, a Harvard, and a Beechcraft. (PMR 76-123)

Groundcrew in Alaska, September 1943, probably from 111 (F) Squadron, painting Canadian identification serials on a recently acquired USAAF P-40. (PL 13146)

Sergeant Jim Chapman provided baths for his colleagues, in this instance Sergeant D.D. Harris, during the Aleutian campaign in 1943. (PL 13082)

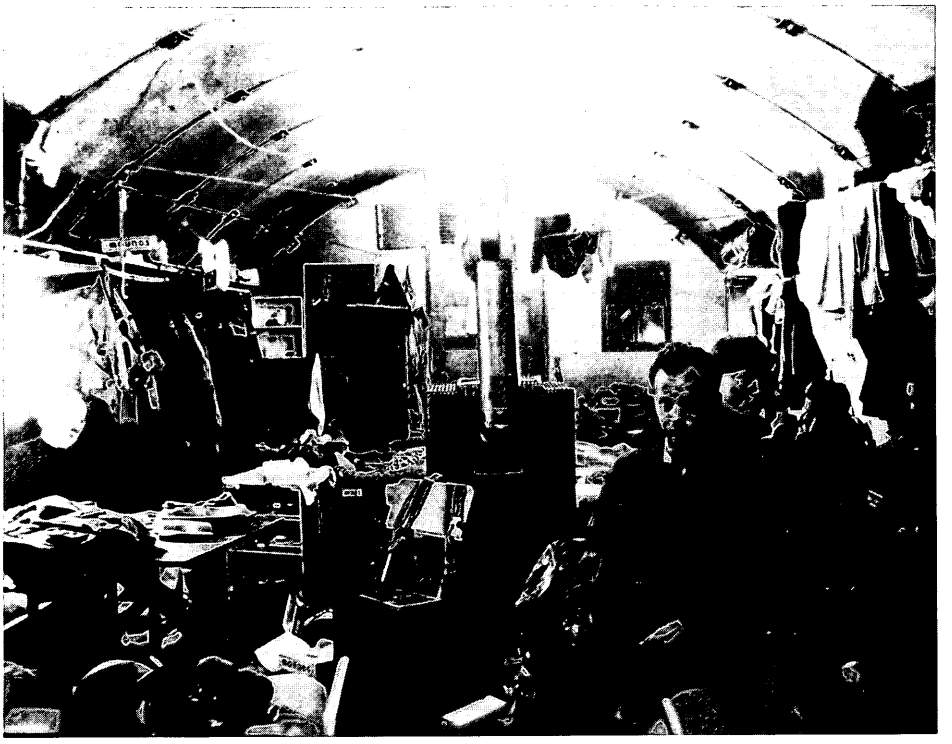


Annette Island airfield was noted for its swampy terrain, gravel dispersals spread along the runways, and dearth of amenities – characteristics which show clearly in this October 1943 view. (PA 140636)

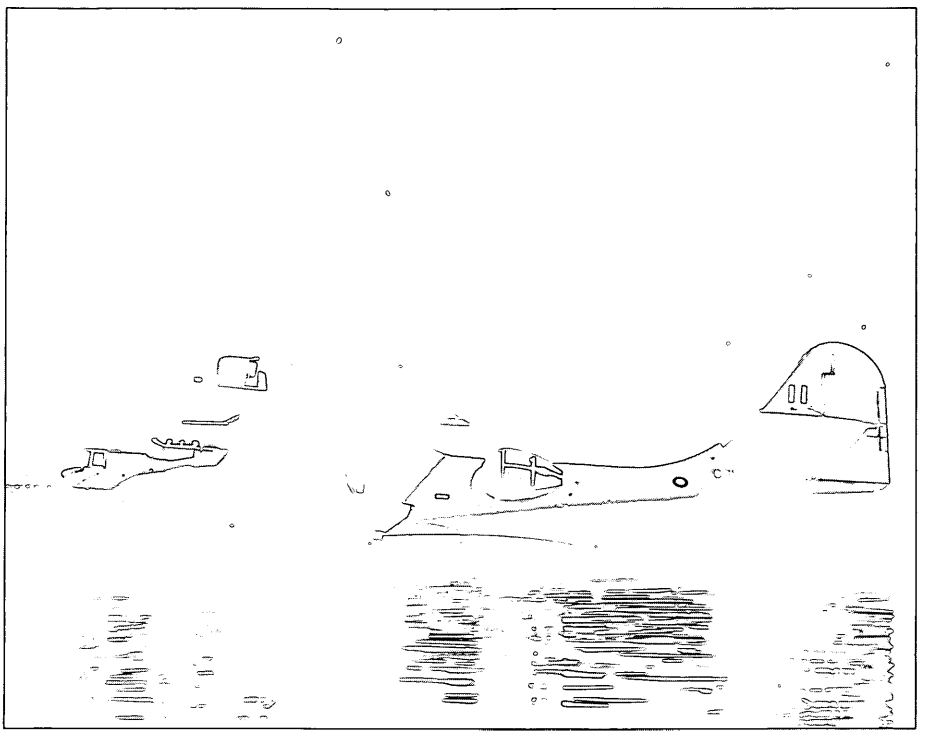
American P-40s which were flown by pilots of 14 (F) and 111 (F) Squadrons, RCAF, during the Aleutian campaign, waiting in a dispersal on Amchitka Island. (PMR 76-386)

Servicing a Kittyhawk in the field, Alaska, 29 October 1943. (PL 13206)

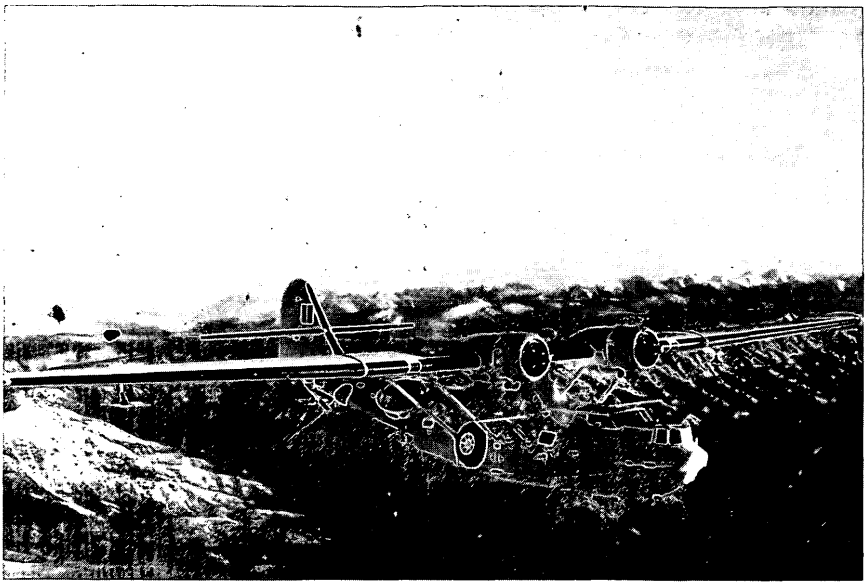
RCAF accommodation tents in the late summer of 1943, Fort Glenn, Alaska. The arctic landscape offered little cover from the elements or the enemy. (PMR 80-248)



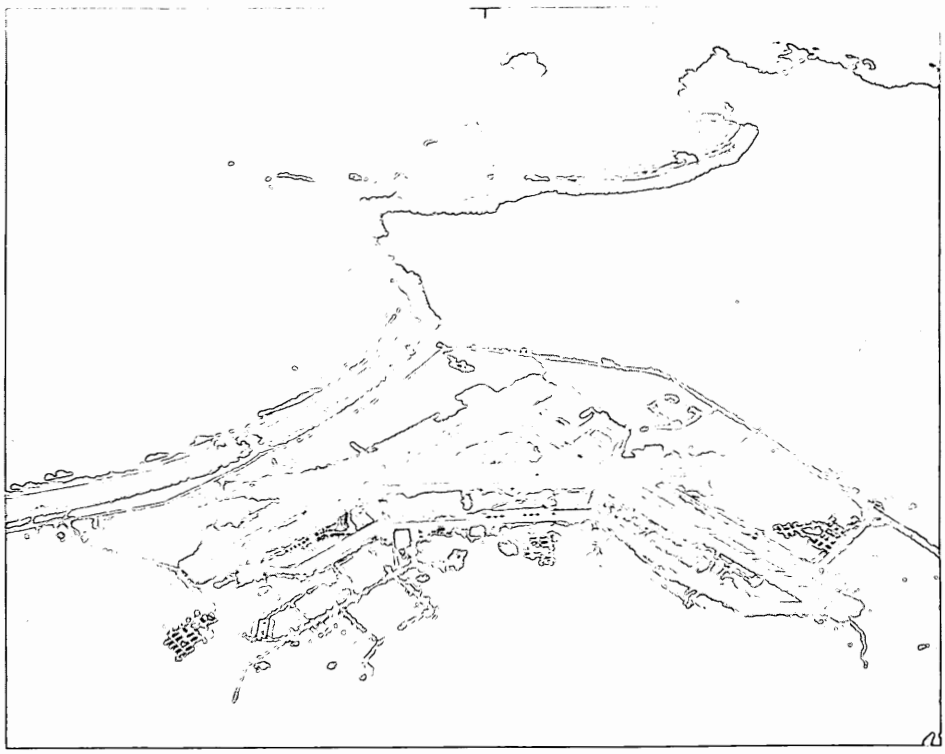
An airmen's hut on Umnak Island, Alaska, 1943, displaying more concern for convenience than military decorum. (PMR 79-538)



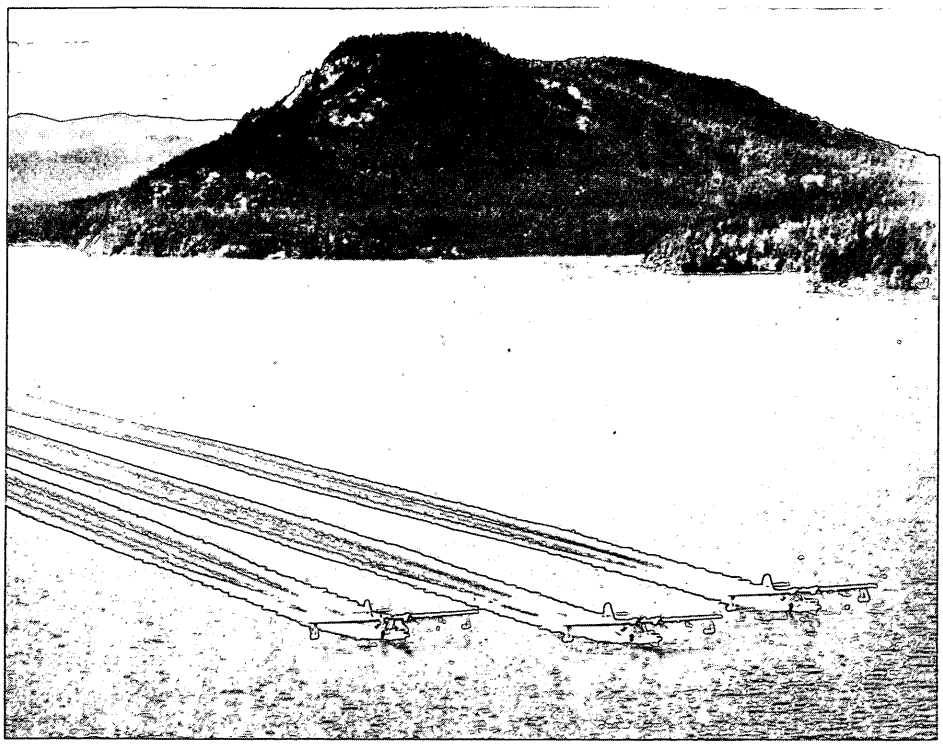
A Canso 'A' of 4 (BR) Squadron, Western Air Command, British Columbia coast, November 1943. (PL 21933)



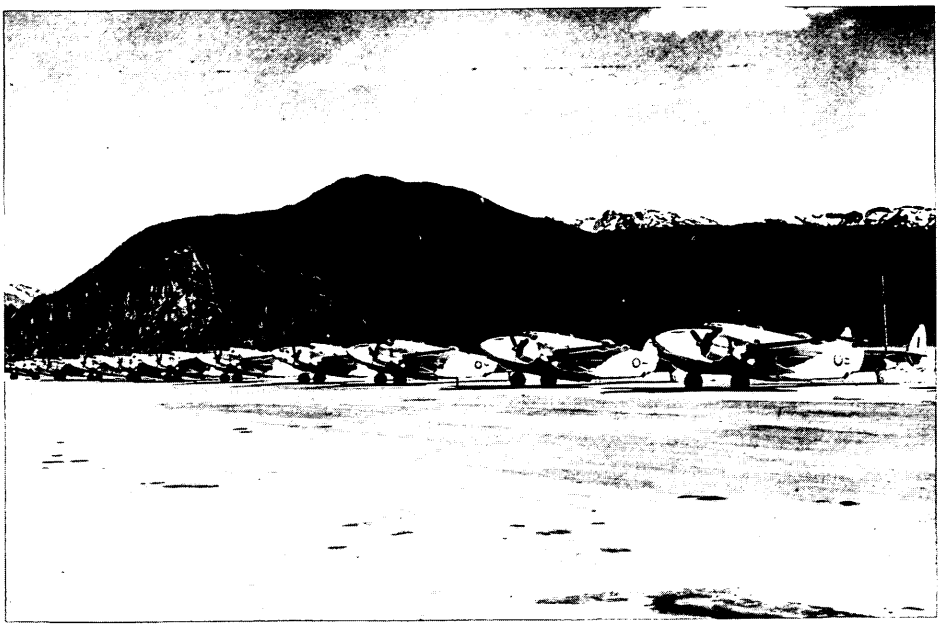
A Canso flying over the west-coast mountains. (PMR 77-14)



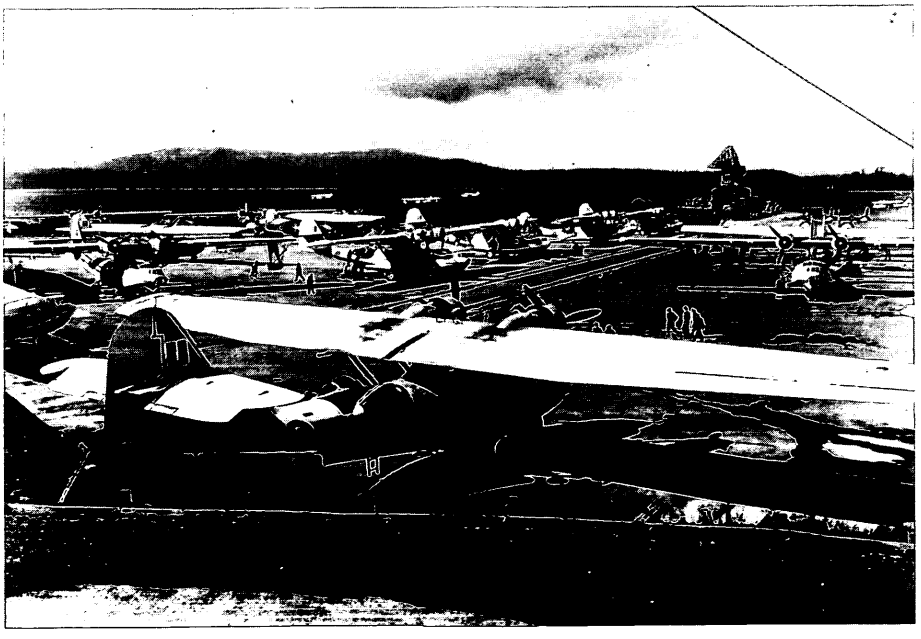
RCAF Station Tofino, BC, one of the most important wartime west-coast airfields. By early 1945 it supported fighter and bomber reconnaissance aircraft, including those maintained to guard against Japanese fire-balloons. (PA 140651)



Western Air Command Cansos. (PL 36716)



Venturas of 149 (BR) Squadron neatly arranged on the tarmac at Terrace, BC, in 1944. (PA 139554)



This idle assemblage of Canso 'A's at an unknown Western Air Command base in February 1945 graphically illustrates the winding-down of operations and the surplus of equipment in the last months of the war. (PA 136642)

Introduction

Home defence was the principal justification for the RCAF after 1935. Overseas commitments were not in favour, and only a few squadrons to support an army expeditionary force figured in RCAF plans. The British Commonwealth Air Training Plan, however, became the largest task immediately after the outbreak of the Second World War, and German victories in Europe during 1940 brought a further emphasis on air power – the only significant way in which the Allies could attack the Axis heartlands until mid-1943 – with its consequent demands for more and more aircrew. Home defence now came last; last in men, aircraft, and other operational equipment. The Home War Establishment [HWE] did become a substantial force, but only at a time when the danger of attack on North America was rapidly receding. Paradox, indeed, proved to be the salient characteristic of the RCAF's home defence problem from 1939 to 1945.

The air defence of Canada should have been a simple task. The threat from enemy air forces was remote; calm military assessments consistently foresaw only a danger of naval attacks on maritime trade and isolated coastal raids. The real problem was defence against enemy surface ships and submarines, and the RCAF pressed patrols far out over the Atlantic to defend ocean shipping against a German U-boat campaign that nearly broke the lifeline to Great Britain.

The fall of France in June 1940 created the possibility of a more serious threat to Canadian soil. It appeared that Britain might be defeated as well, removing the shield that the Royal Navy and Royal Air Force provided for North America. That danger brought substantial military collaboration between Canada and the United States (still a neutral power), including the preparation of joint defence plans. Canada, in the meantime, sent assistance to Great Britain at the expense of her own home defences. It was the right decision. In the fall of 1940 the RAF decisively defeated the Luftwaffe's daylight offensive against England, while North America remained an inactive theatre of war. Until December 1941 the danger was concentrated in the North Atlantic, where Canada had assumed responsibility for the defence of Newfoundland.

Improvements in equipment and strength of the HWE occurred at a leisurely pace until the Japanese attack on Pearl Harbor. Unlike the events of 1940, this disaster brought an extraordinary expansion of the HWE that owed as much to an atmosphere of near panic in British Columbia as the actual military threat. Now

at war, the United States faced formidable global responsibilities and, without abdicating some of them, could not defend the entire west coast of North America. The RCAF dispatched squadrons to assist in countering a Japanese thrust along the remote Aleutian Island chain just at the time that German U-boat attacks close in to Newfoundland and Nova Scotia, and deep within the Gulf of St Lawrence, placed enormous burdens on the Home War Establishment on the east coast.

The air staff aimed at creating a home air force sufficiently powerful both to defend the coasts against enemy attack and conduct anti-submarine operations in the North Atlantic. Air Defence of Canada plans were devised that called for many more squadrons than were really needed, and senior air officers persisted in their demands even after the United States Navy's victory at the Battle of Midway in June 1942 effectively eliminated any threat to British Columbia.

The RCAF viewed the direct defence of Canada as a purely Canadian concern, but found itself continually bound by the constraints imposed by coalition warfare. With the Americans and British differing over the allocation of scarce resources between the European and Pacific theatres, and competing among themselves for what was available, claims for more squadrons and more aircraft often appeared whimsical. Because of the failure of Canada to develop its own aero-engine manufacturing capacity, the RCAF was in a dependent position, unable to demand, only to plead for, the aircraft needed to equip its squadrons. The HWE, even so, grew too large during the Second World War, particularly in fighter aircraft. Thus arose the paradox of a force too heavily armed with fighter squadrons for which there was no reasonable employment, suffering from a shortage of men and matériel in its vital anti-submarine role as the U-boat war on the Atlantic reached its crisis in 1942–3.

9
Policy and Procurement

As the world learned of the German-Soviet non-aggression pact on 24 August 1939, Mackenzie King's Cabinet met to discuss the deteriorating international situation. 'Canada would participate' in a general conflict involving Great Britain, it was decided, although 'Parliament would decide' the precise nature of its commitment.[1] Within a few days the three armed services had deployed units on both coasts, and the chiefs of staff had submitted to the minister of national defence their recommendations for military operations. The militia and the Royal Canadian Navy strongly advocated direct support to Britain. The chief of the general staff, Major-General T.V. Anderson, proposed at least a one-division expeditionary force, and Rear-Admiral Percy Nelles urged that the navy be placed at the disposal of the Royal Navy. Air Vice-Marshal G.M. Croil, the chief of the air staff, was concerned less with an overseas commitment than the responsibilities the RCAF had assumed for the direct defence of Canada. Of the twenty-three squadrons to be mobilized, seventeen would remain in the country, situated for the most part on the Atlantic and Pacific coasts. The other six squadrons – three bomber and three army co-operation – could be made available to support an expeditionary force.[2]

The eight existing permanent squadrons were already taking up their war stations, and by 5 September eleven auxiliary squadrons had been placed on active service. None of the units was fully manned or equipped. As of 5 September, the air force had only 4153 officers and airmen, far fewer than its authorized establishment of 7259.[3] Of the fifty-three aircraft 'able to take their place on active service,' including eight on the west coast and thirty-six in the east, many were civil types converted with floats for patrol work and most of the others were obsolescent.[4] The outbreak of war, moreover, threatened to curtail the RCAF's supply of aircraft. American neutrality laws might entirely prohibit the export of war matériel from the United States, and with the possibility of RAF requirements outstripping British manufacturing capacity, Canadian orders could not be guaranteed. Even if the domestic aircraft industry could be quickly expanded, as the chief of aeronautical engineering, Air Commodore E.W. Stedman, suggested, no aero-engines were produced in Canada and British supplies were short.[5]

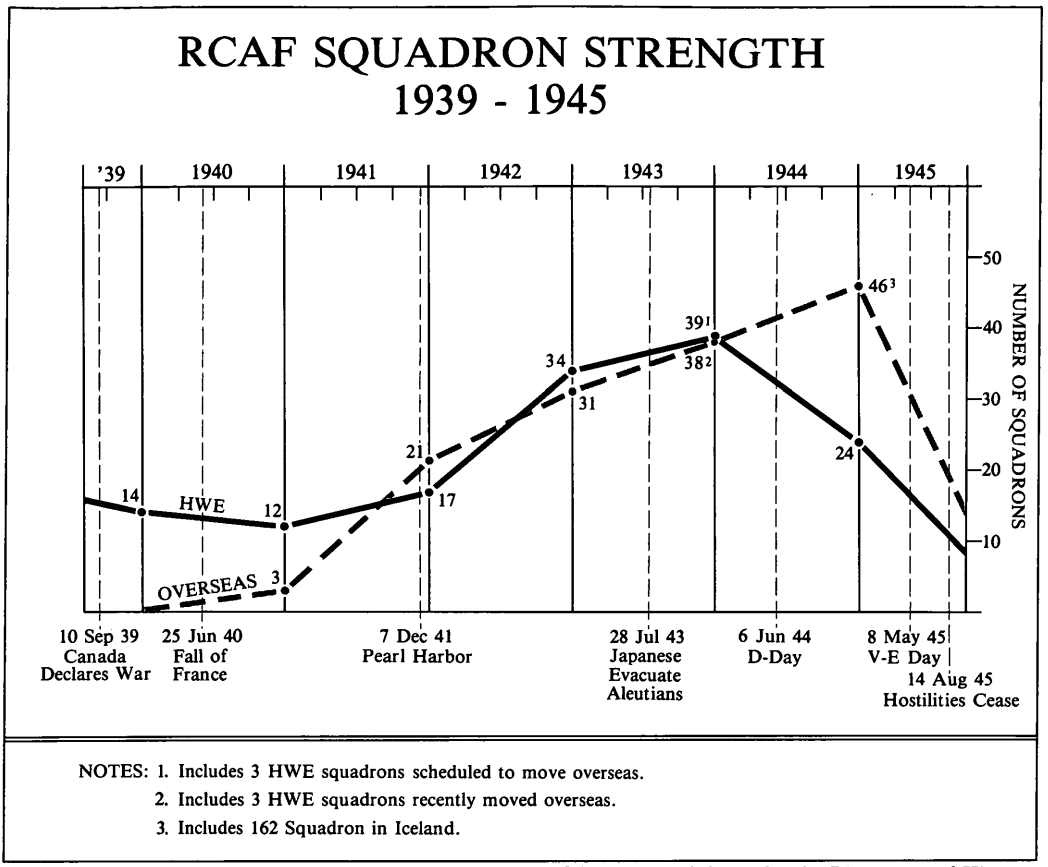
Financial limitations were a further complication. The government enjoined

all three services to keep their estimates to a 'very moderate level,' then reduced them considerably. The air force's initial wartime request for $136 million for the period ending 30 August 1940 was pared to $77 million, an amount which, under the best of circumstances, allowed for only 167 aircraft, less than a third of the 574 called for in prewar planning and barely enough to provide the initial equipment for sixteen squadrons, with no provision for reserves, wastage, or training machines.[6]

In light of the dismal prospects for implementing the full twenty-three squadron programme, Air Force Headquarters allocated its limited equipment and manpower to fifteen squadrons and, by early November, had disbanded the rest.[7] Among the units that remained on the order of battle were several originally earmarked to support an expeditionary force. Since prewar plans had concluded that at least seventeen squadrons were required for home defence, a decision had to be made whether any could be spared to accompany the army to Europe.

As Croil grappled with this problem during the first three months of the war, the British proposal for a huge training programme in Canada fundamentally reshaped RCAF planning. When he met with the Cabinet emergency council on 5 September, the chief of the air staff declared that, although there was no firm commitment to dispatch Canadian squadrons overseas, there was also no reason for all RCAF units to remain at home. The 'odd bomb' might fall 'here and there,' but the threat to the dominion was not serious enough to warrant the air force's total concentration in North America. Ten days later, after hearing the British say that training was the best contribution Canada could make, he informed the Defence Council (the minister of national defence's advisory body) that all the RCAF's trained men should remain in Canada as instructors even at the expense of weakening home defence squadrons. On 25 September in another appreciation Croil announced that three squadrons could proceed overseas despite the RCAF's training commitments at home.[8] When Norman Rogers (who succeeded Ian Mackenzie as defence minister) complained on 3 October that sending only three units abroad would not 'satisfy public sentiment,' Croil countered that the Home War Establishment (as the home-based units were now called) could not be weakened further.[9] In the following weeks, however, Croil was apparently persuaded by his minister's views. '[It is] detrimental to Canada's prestige as a nation,' Croil wrote to Rogers on 23 November 1939, 'to restrict its official air effort' to training or to allow its overseas contribution to be swallowed up in the RAF. Canadians by temperament would 'prefer to be at the front' in Canadian units. No fewer than twelve squadrons should go.[10]

By then the larger context within which the RCAF would develop was changing fundamentally. Discussions between the Canadian and British governments over article 14 of the British Commonwealth Air Training Plan Agreement finally guaranteed a limited supply of aircrew to the Home War Establishment, thereby ensuring that the squadrons in Canada could be maintained. More significantly, negotiations on article 15 suggested that a number of Canadian squadrons would be formed overseas from BCATP graduates. It seems likely that Croil was laying a foundation for creating RCAF squadrons overseas, and not



NOTES: 1. Includes 3 HWE squadrons scheduled to move overseas.
2. Includes 3 HWE squadrons recently moved overseas.
3. Includes 162 Squadron in Iceland.

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merely RAF squadrons with Canadian aircrew. Certainly this was the course of action favoured by many members of the air staff, who regretted that there had been no distinctly Canadian squadrons overseas until the very end of the First World War. If Croil had been converted to the idea of creating a national air force abroad, however, the government was not convinced. Although it agreed to send 110 (Army Co-operation) Squadron to support the 1st Canadian Division, no other RCAF units were to go overseas.[11]

By the end of 1939 fourteen squadrons were on active service in Canada, one of which, No 110, was preparing to move to England, taking on additional personnel from the recently disbanded 2 (AC) Squadron. Only No 1 (Fighter) with seven Hawker Hurricanes and 11 (Bomber-Reconnaissance) with ten Lockheed Hudsons were adequately equipped. Croil therefore submitted estimates for the creation of an operational force of 252 combat aircraft, including twenty-four Hurricanes, eighteen Bristol Blenheims, thirty-four Bristol Bolingbrokes, twenty Douglas Digbys, thirty Supermarine Stranraers, twenty-four Hudsons, sixty-six Westland Lysanders, and thirty-six modern flying boats and amphibians (flying boats fitted with landing gear to permit

operations from aerodromes as well as from water). For the last requirement the air staff selected the United States Navy's Consolidated PBY, known as the Catalina in the RAF, and, in the variant later built to RCAF specifications, the Canso or Canso A, the amphibious version. To cover wastage on operations, a total of 315 combat aircraft would have to be acquired; Croil hoped the programme could be completed during 1942. Compared to the more than 4000 aircraft needed for the BCATP this was a modest enough request, but one which proved difficult to satisfy.[12]

Despite neutrality laws, some American aircraft found their way to Canada. Since direct delivery by air was specifically prohibited, in December American pilots flew the first two machines to a field in Sweet Grass, Montana, and left them to be towed across the border. A Canadian present at the scene recalls what happened: 'They landed over the brow of a hill where we were waiting and then taxied up to a barbed wire fence separating a Canadian field at Coutts, Alberta, from the adjacent American field. The Americans got out and shook hands with [Squadron Leader R.C.] Gordon; everyone was in civilian clothes. The wire was then cut, a rope thrown across the border to be tied on the aircraft, as a team of horses dragged them over the line. The ground sloped towards our side and the first Digby began to roll quite rapidly causing considerable tension among the bystanders. Fortunately someone managed to get onto the step of the aircraft and after quite a struggle succeeded in putting on the brake.'[13] Eighteen other Digbys crossed at Emerson, Man., and No 10 (BR) became the first operational Digby squadron in June 1940.[14]

The international border was the least of the air force's problems. Canada's wartime procurement machinery was a major obstacle, particularly in the period before the Department of Munitions and Supply was formed under C.D. Howe in April 1940. Before that date neither the Defence Purchasing Board nor its successor, the War Supply Board, had placed large enough orders, even though funds were available, and as a result some Canadian factories were forced to lay off men. In part this was because of the unwieldy Defence Purchasing, Profits Control and Financial Act of June 1939, which made it difficult to establish the costs of contracts.[15] At the same time, officials bound by the government's policy of limiting expenditures to avoid massive deficits found that the cost of manufacturing airframes for Canadian needs alone was often prohibitive. The Department of Munitions and Supply was intended to rationalize all production and procurement – a great improvement – but Howe's emphasis on production in quantity did not always work in the RCAF's best interests. The Home War Establishment needed limited numbers of several types of aircraft rather than large deliveries of only a few.

More disturbing, perhaps, though not surprising, was the fact that the Air Ministry in London favoured RAF requirements at the expense of the RCAF. There were few delays in the supply of training aircraft, Air Vice-Marshal Croil noted in April 1940, because the RAF had a vested interest in the success of the BCATP.[16] Canada and Great Britain, however, were competing for the limited supply of fighters, bombers, and maritime patrol aircraft available in the United States and the United Kingdom. The British inevitably and rightly judged their military

situation to be more precarious than that of an overseas dominion far removed from the *Luftwaffe*, and after the fall of France in June it was obvious that the coming air battle over Britain was likely to be crucial. No one could deny the RAF's need for replacements, and yet the RCAF too had to expand, and (as it turned out) on a much larger scale than anyone had anticipated.

With expansion came the appointment, on 23 May 1940, of Major C.G. Power as minister of national defence for air. In law there was still a single Department of National Defence whose minister, Colonel J.L. Ralston, had overriding authority, but he confined himself to army concerns. Power, it will be recalled, found that he could not work with Croil and moved the chief of the air staff to the post of inspector general on 28 May, choosing Air Vice-Marshal Lloyd S. Breadner as the new professional head of the RCAF. Early in June the air members for personnel, organization and training, air staff, and aeronautical engineering (Group Captain Harold Edwards, and Air Commodores G.O. Johnson, A.A.L. Cuffe, and E.W. Stedman, respectively) joined Power and Breadner as members of an Air Council to co-ordinate policy, operations, administration, management, and training. This replaced an earlier council, which had not included the minister. Although fundamental policy decisions still appear to have been left in the hands of the chief of the air staff and his minister, the new Air Council nevertheless offered Power easy access to all his senior officers in a collegial atmosphere which he seemed to appreciate.[17]

As the new administration took shape, Britain's increasingly perilous situation overcame the government's reluctance to send additional squadrons overseas. Nos 1 (F) and 112 (AC) Squadrons were dispatched to England on 9 June, and all Canadian Hurricane production was diverted to the RAF. Despite Air Ministry appeals for trained crews from the Home War Establishment to make up for recent British losses, however, neither Power nor the prime minister would go any farther. Concerned about the impact on public opinion, they would not accept a British proposal to divert squadrons from the west coast or relegate those in the east to the status of operational training units.[18]

The air staff shared at least some of the government's concern about the state of Canada's defences. The BCATP and overseas demands had so restricted the growth of the Home War Establishment that only six squadrons were really effective, and that was not enough. On 21 May Breadner gave Air Commodore Cuffe the task of finding American replacements for the Hurricanes that had been offered to Britain, and henceforth the air member for air staff or the deputy chief of the air staff took over responsibility for the Home War Establishment. Within the month Breadner also recommended an increase in Eastern Air Command by five squadrons – two fighter and three flying-boat – to eleven, and of Western Air Command to eight, for a total of nineteen. This was essentially a continuation of the uncompleted prewar plan, with the addition of a fighter and maritime-patrol squadron on the east coast, a reflection of the RCAF's new responsibility for the defence of Newfoundland.[19]

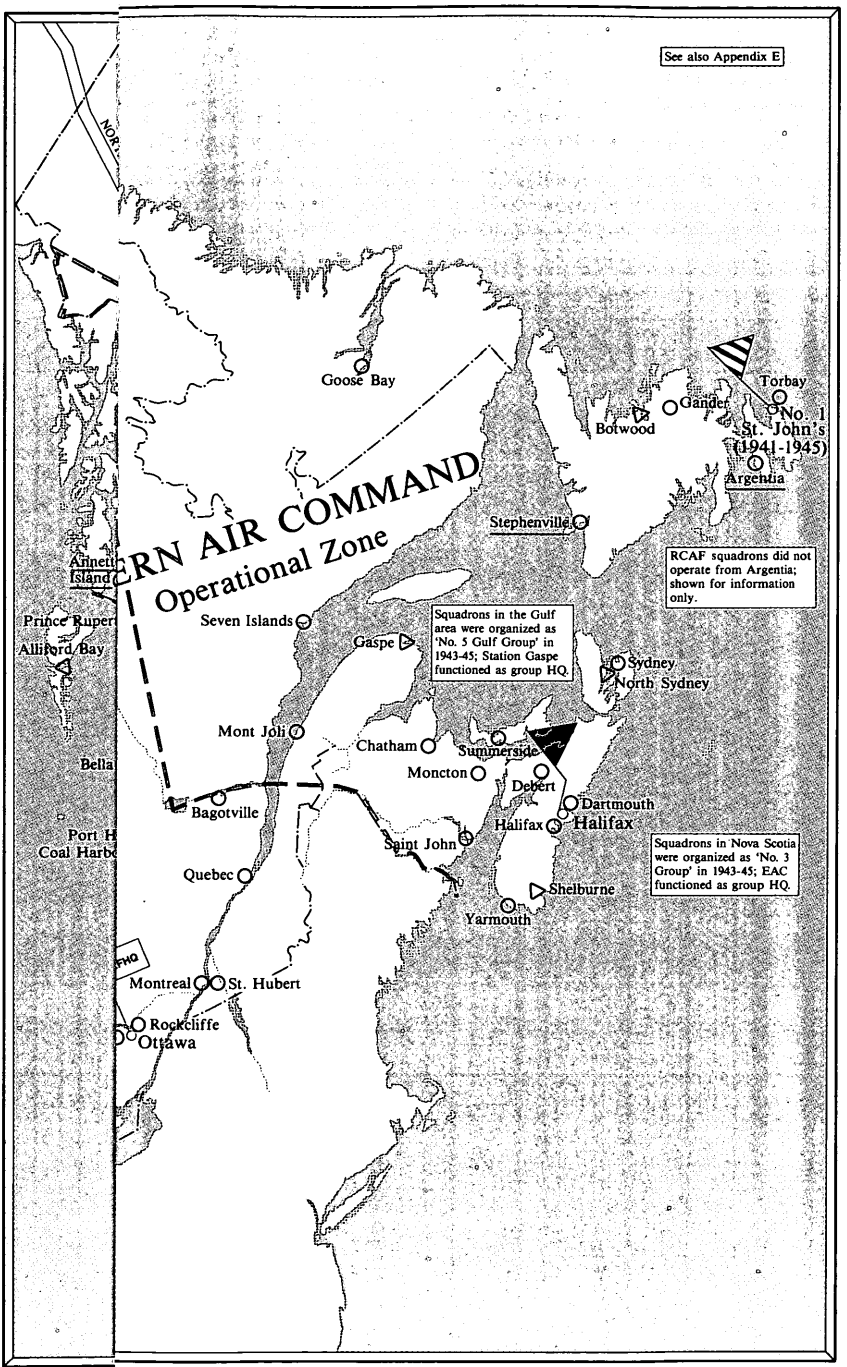
Breadner's appreciation reflected the views of the chiefs of the naval and general staffs. Canada would 'sooner or later ... have to meet the maximum scale of attack' laid down in prewar assessments – bombardment by two eight-inch

cruisers or one battleship and landings by small raiding parties – and the three services agreed that the RCAF was 'inadequate' to meet the threat. The Home War Establishment must be expanded, the chiefs of staff concluded, but not at the expense of the BCATP or the air force's existing overseas commitments. The new squadrons advocated by Breadner would therefore not be formed until September at the earliest, and sometime later than that if aircraft and aircrew were required elsewhere.[20]

The gloom of May and June had brightened somewhat by August. The meeting between Mackenzie King and President Roosevelt at Ogdensburg not only opened the door to military co-operation with the United States, but also confirmed that Canada would not have to stand alone against Germany should Britain fall. The promise of American help meant that the air staff could continue to argue the case for further reinforcements to Britain. Spirits lifted again in September following the defeat of the *Luftwaffe*'s day offensive against the United Kingdom. Still, the need to assist the British remained, and the RCAF held to the view that any increase in the number of squadrons in Canada would interfere unnecessarily with the movement of aircrew overseas. Air Force Headquarters found support for their position from the Canada-United States Permanent Joint Board on Defence [PJBD], formed as a result of the Ogdensburg meeting. The American government, in its pessimism about the prospects for Britain's survival, believed that a major Axis attack on the Western Hemisphere was imminent. After listening to Canadian statements minimizing the threat to North America, however, US members of the PJBD agreed that sizeable forces need not be stationed on the continent. Provided facilities were made ready for American air forces in Newfoundland and Canada's Maritime provinces, the RCAF could establish its own priorities and make its own plans.[21]

These developments were reviewed on 1 October 1940, when Air Vice-Marshal Breadner submitted his outline for the RCAF's 1941 programme. Although he stipulated that air training, overseas commitments, and the construction of airfields called for by the PJBD must have priority, he also noted that the time had come to begin completing the nineteen-squadron plan put forward in June. In particular he asked for 200 Martin B-26 Marauders to replace the less capable Bolingbrokes in 8 and 119 Squadrons as well as for new units. Replacements for the Hurricanes sent to Britain and for the ancient Blackburn Shark torpedo-bombers and Vickers Vancouver flying boats in the west, however, could wait.[22] Unfortunately, Breadner's request failed to take full account of the extent to which Canada depended on Great Britain and the United States for its aircraft and for all of its aero-engines. Air planning could not be done in isolation.

Referring to an earlier RCAF appreciation, the Air Ministry in London had drawn up a 'Target Program for the Dominions' shortly after Breadner submitted his proposals on 1 October. On the basis of British strategic assessments, the Air Ministry concluded that the Canadian Home War Establishment could be limited to no more than nine, and perhaps as few as seven, squadrons, with an initial establishment of seventy-six aircraft.[23] What could have been seen as a British attempt to dictate Canadian home defence policy prompted a mild but firm reply.



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*Compiled and drawn by the Directorate of History.

The RCAF would make no further demands on the British for aircraft, Breadner wrote, but would seek instead to meet requirements from Canadian and American production (except for engines, which were still needed from Britain). At the same time, however, he informed the Air Ministry that the Home War Establishment would grow to nineteen fully equipped squadrons as conditions permitted. This was necessary because a successful enemy raid on Canada made possible by the RCAF's inadequate resources could 'disrupt Canada's war effort' and so play on the public's exaggerated fears that it would 'interfere with the flow of personnel and material to Great Britain.' At the same time, intensified German attacks on shipping had increased the need for air protection in the western Atlantic.[24]

Breadner's contention that a few German aircraft could attack vital points in the Maritimes and that enemy air bases might be constructed at isolated points on the east coast was unlikely to receive a sympathetic hearing from those accustomed to the German bombing of London. At the Washington ABC talks of January-March 1941, the 'Riviera' conference at Argentia, Nfld, in August, and the 'Arcadia' conference in December – at all of which Canadians were conspicuously absent – both British and American staffs agreed that North America was an inactive theatre of war. Little weight was given to matters of purely Canadian concern; the dominion could be supplied on a reduced scale.[25]

Breadner's judgment was also being questioned in Canada. Defence ministers Ralston and Power were stupefied when, in January 1941, the chief of the air staff rejected an offer by the British to give Canada sixty Hurricanes. The minister of aircraft production in England, the expatriate Canadian, Lord Beaverbrook, had earlier declared that allocating such modern fighters to North America would be a 'crime against the Empire,' but Ralston had somehow convinced him to change his mind. Breadner may well have been right to think that the Bell P-39 Airacobra or the Curtiss P-40 Kittyhawk, two American fighters soon to be available, were superior to the Hurricane I and therefore worth waiting for. With their limited range, the Hurricanes were perhaps more useful in Britain, but no matter what their limitations, they were superior to the few Grumman FF-1 Goblin biplanes training for service at Halifax, and there were no other fighters in the country. Power overruled Breadner and asked Ralston to obtain the Hurricanes.[26]

Breadner's apparent lack of concern about the speedy expansion of the Home War Establishment – despite his commitment to the idea of nineteen squadrons – continued through February. At the end of the month, two days after a Chiefs of Staff Committee appreciation reasserted the need to strengthen the country's air defences, Breadner reiterated the RCAF's commitment to assist the RAF overseas. It was true, he admitted, that Canadian-based squadrons were understrength and inexperienced because of limits set on the number of BCATP graduates posted to the Home War Establishment, but he expected to make good all manpower shortages by May. Rather more curiously (given what he knew about the Hurricane offer in January), the chief of the air staff also noted that nothing would be gained by rushing the organization of these squadrons since so few aeroplanes were available.[27]

Breadner was caught by conflicting pressures. Determined to maintain the flow of aircrew to Britain, he had to minimize the threat to Canada in dealing with his political masters. Yet to persuade the British and Americans to supply Canada with airframes and engines it was necessary to emphasize the dangers that the country faced. Such conflicting signals encouraged Canadian politicians to choose their own course, and since by and large they agreed that Canada's air defences were too weak, they were bound to put the emphasis on defending the homeland. On 2 March 1941 the prime minister intervened directly in deliberations aimed at securing British approval for the nineteen-squadron Home War Establishment programme. Citing the recent Chiefs of Staff Committee appreciation, Mackenzie King told Churchill that he anticipated early delivery of the aeroplanes required to bring all nineteen units up to strength.[28] The British were unresponsive. Great Britain had to be 'fully prepared to meet a large scale attempt at invasion,' replied the British prime minister, while Canada faced only 'tip and run' raids.[29]

King's view eventually prevailed. During a trip to England in April, Air Commodore Cuffe used a PJBD recommendation that fighter cover be provided for the aluminum industry at Arvida, Que., to persuade Air Vice-Marshal Sir John Slessor of the RAF that there was an immediate requirement for Hurricanes to form a new squadron specifically for this purpose. 'It is obviously a very important matter,' Slessor conceded, 'and we should not be lulled into a false sense of security by its distance.'[30] In May, as will be explained in Chapter 12, U-boat operations south of Greenland gave Canada important responsibilities in the northwest Atlantic, and after strong representations from Eastern Air Command the British loaned nine Catalinas to the RCAF. Then, in June 1941 the defence committee of the British Cabinet finally accepted in principle the Home War Establishment expansion plan and agreed to post a large number of BCATP graduates there.[31]

RCAF requirements at this time seemed reasonable enough. If Canadian factories could, as planned, turn out 151 Bolingbrokes, some Stranraers, fifty PBYs, 144 P-39 Airacobras, and 200 Martin B-26 Marauders, and if engines could be secured, the air force would be able to maintain nineteen squadrons at home. But the British, whatever they might have said in June, had their own needs. In September the Air Ministry asked for the return of nine Catalinas loaned in May and, as explained in chapter 10, for an additional fifty ordered by the RCAF. Canada agreed to surrender thirty-six. The next month the British took an even harder line, asking Canada not to undertake licensed production of the Airacobras and Marauders, but to build Avro Lancaster heavy bombers for the RAF instead. At the same time the British refused any early releases to Canada of P-39s on order for the RAF in the United States.[32]

Eagerness to support Britain had placed the RCAF in an awkward position. By agreement in 1939, Canadian factories had concentrated on producing training machines and only a few combat types for the RAF and RCAF, while the Air Ministry undertook to provide aircraft required by the RCAF that Canada had agreed not to assemble. This arrangement had never been wholly satisfactory because, understandably, the RAF became increasingly reluctant to release

combat aircraft, especially after the fall of France and the opening of the war in North Africa. Canada had no choice but to look once again to the United States, either by placing orders directly with American firms or by seeking licensing agreements, as Breadner had done with the P-39s and B-26s. The latter alternative also appealed to C.D. Howe, who was anxious to engage Canadian factories in war production. The decision to switch to Lancasters did not upset Howe's plans – Canadian plants would still be busy – but it played havoc with Breadner's. With no domestic supplier for the types it required, and with the British blocking access to the American market without offering anything in return, the RCAF found itself increasingly isolated by Anglo-American co-operation in the allocation of war supplies.[33]

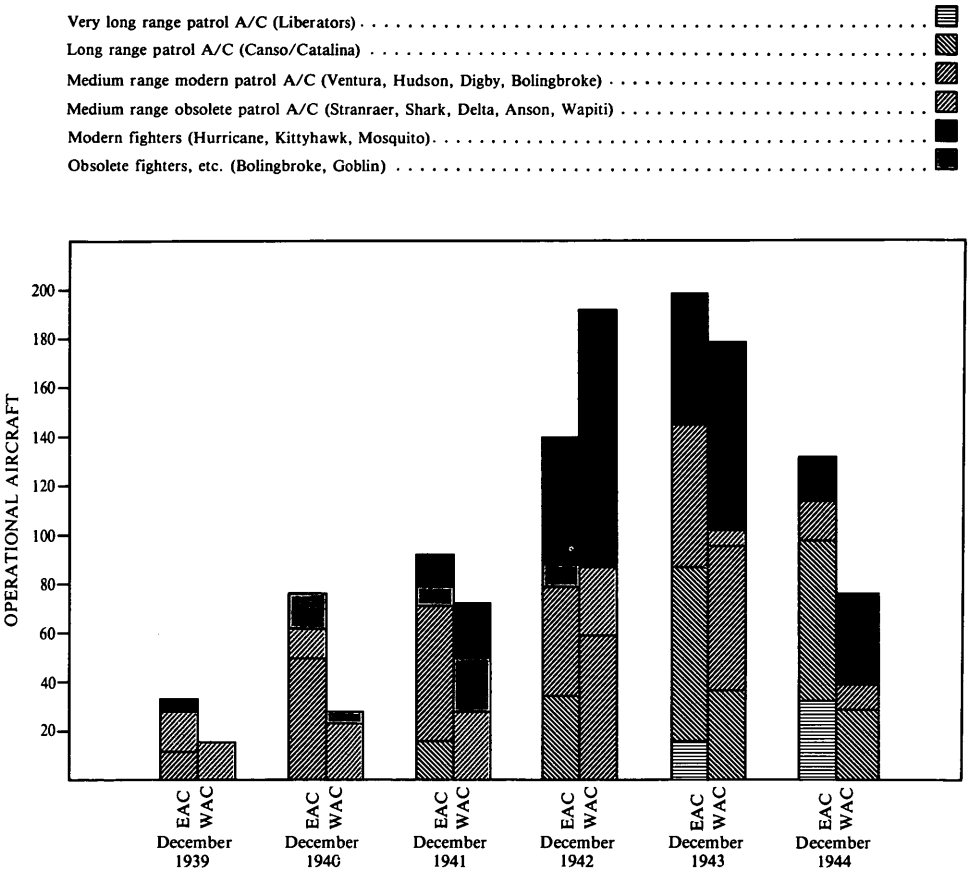
Co-ordinating the allocation of Allied aircraft was the task of the Anglo-American Joint Aircraft Committee [JAC]. Formed on 22 April 1941, and including among its members General H.H. Arnold of the US Army Air Corps, Rear Admiral J.H. Towers, US Navy, and Sir Henry Self and C.R. Fairly of the British Supply Council, the JAC had authority 'to schedule all deliveries ... the production of component parts as well as end products, and ... to make decisions prescribing standardization to be binding on all the parties concerned.'[34] Canada, clearly a concerned party, was not represented on the committee. The RCAF could hope only to influence British and American opinion through the Air Ministry, the PJBD, or other direct military contacts.

This was not easy. At the 'Argentia' conference in August, Admiral of the Fleet Sir Dudley Pound, first lord of the Admiralty, noted with surprise the number of amphibians and flying boats allocated to the RCAF. It may have been his intervention that led the Air Ministry to ask for the fifty Catalinas in September. Later that fall it seemed that the Americans were becoming more sympathetic, the RCAF encountering no difficulty in making arrangements to procure Curtiss P-40 Kittyhawks when P-39 supplies dried up. In November, however, the US chiefs of staff concluded that Canada needed only eight home defence squadrons (four fighter, four bomber), eleven fewer than the RCAF was contemplating.[35]

With the Americans and British together controlling the allocation of engines and airframes to Canada, the future organization of the RCAF's Home War Establishment was in considerable doubt when the Japanese attack on Pearl Harbor brought war in the Pacific on 7 December 1941. The recent acquisition of thirty Kittyhawks had improved the country's fighter defences, but the HWE still numbered only twelve combat squadrons, and of its 160 or so aircraft twenty-eight were obsolete and seventy-three were less than adequate for shipping protection and anti-submarine operations. Moreover, there was little reason to expect new aircraft to replace the Sharks, Vancouvers, Digbys, Bolingbrokes, and Hudsons or to complete the other seven squadrons that remained on the HWE's prospective order of battle.

The broadening of the war dramatically changed Canada's strategic position. Although the United States was now an ally, Canada faced enemies on both coasts, and to many observers seemed open to direct attack as never before. Japan's success at Pearl Harbor shocked Air Force Headquarters, not because

HOME WAR ESTABLISHMENT OPERATIONAL AIRCRAFT
EASTERN AND WESTERN AIR COMMAND



Source: Operational Record Books, DHist.

war with Japan was unexpected, but because of the extent of the losses. Senior officers from all three services had been worried about the state of Canada's Pacific coast defences, but they had always insisted that the American fleet was a crucial guarantor of the region's security. 'Unless the United States Navy is seriously defeated or loses its northern bases,' Air Vice-Marshal Croil had declared in October 1941, Canada's defence problem in the west could be limited to 'watchful readiness.' There being little danger of direct attack, the RCAF could safely limit its role to offshore reconnaissance to detect surface

raiders.[36] Breadner agreed with Croil. So long as the Americans were in a position to offer effective assistance, the chief of the air staff wrote, it did not matter that the RCAF could not operate against 'larger naval attack, including carrier borne aircraft.'[37]

Not so confident, Power wanted an assurance that the west coast was secure. Breadner told the minister in late November that one fighter and five bomber-reconnaissance squadrons could be made available from Eastern Air Command in an emergency, but at the same time he directed his staff to conduct a more thorough strategic assessment.[38] Carried out between 30 November and 7 December, it too counted on a strong American fleet and discounted any notion of an American defeat. By 10 December, however, the Chiefs of Staff Committee was reporting something quite different: although it had been taken for granted that 'if Japan entered the war ... the almost inevitable entry of the United States would more than balance the added threat to this continent – the unforeseen reverses in the Pacific ... tended to modify this assumption.'[39] American ships no longer stood guard as anticipated, and to many in Ottawa, especially the political leaders, it now appeared that the Japanese had won a free hand to move about the Pacific at will, even east of Hawaii.

The chiefs of staff did not, even so, want to be 'stampeded' by alarmists, fearing the diversion of attention away from the war against Germany. Furthermore, they believed that Japan's main thrust would be into the south Pacific, not against the western coast of North America. Japan, however, would still be able to mount an occasional air raid, to bombard the shore, or stage small unit raids on shore. Breadner felt compelled to transfer one fighter and one bomber-reconnaissance squadron to the west coast, to complete the personnel and aircraft establishments of Western Air Command units 'as far as possible,' and to prepare Prince Rupert, Bella Bella, and Coal Harbour (on the northwest coast of Vancouver Island) as operational bases. In addition, the RAF's operational training unit at Patricia Bay was put on stand-by.[40]

These measures represented Canada's unilateral and improvised response to an unexpected emergency. The final shape of North American air defence depended ultimately on Canadian-US co-operation through their joint defence plan, ABC-22, which came into force on 7 December.[41] Early Canadian arguments that the Japanese were 'by far too good tacticians' to 'jeopardise their naval superiority' by attacking the west coast did not win American approval.[42] Over the next few months US representatives on the PJBD, 'very frightened' by the prospect of invasion, insisted on providing for the worst possible case, and pushed for American strategic and tactical command of all forces on the coast, a proposition wholly unacceptable to Canada. The Americans also worried about the increased likelihood of German incursions against the eastern part of the continent, urging the necessity of fighter defences at Sault Ste Marie to protect the ship canal there, the busiest in the world, and perhaps even continuous standing air patrols over Great Lakes iron ore traffic to protect it from attacks out of Hudson Bay.[43] On the Atlantic coast the US Army's commanding general in Newfoundland, Major General G.C. Brant, anticipated the fall of Great Britain, German victory in Africa, and 'devastating air raids' against all his installations

as a prelude to a 'probable attempt in later stages to capture and hold Newfoundland.'[44]

Pessimism was not an American monopoly. Subordinate commanders on both Canadian coasts did not share the more detached view of the chiefs of staff in Ottawa. Very shortly after the Chiefs of Staff Committee reaffirmed that Canadian objectives were 'unlikely to be included in the probable main strategic aims of the enemy,'[45] Air Commodore L.F. Stevenson, air officer commanding Western Air Command, asked for sixteen squadrons to deal with the maximum scale of enemy attack by battleships, cruisers, and carrier-borne aircraft. Similarly, the Joint Services Committee (Pacific) cautioned that forward airfields planned for the Queen Charlotte Islands should not be built because they could be overrun easily and used by the Japanese to attack Victoria and Vancouver.[46] The air staff treated all such submissions sceptically. The director of plans and acting air member for air staff, Group Captain F.V. Heakes, noted that Western Air Command was failing to show 'any determination to improve any situation that exists or any impression of willingness ... to accept and make the best use of forces and facilities which exist.' Eastern Air Command's need for men and equipment was equally urgent; Stevenson could not expect immediate reinforcement.[47]

Improvements within the scope of available resources were another matter. On 12 February, two weeks before Stevenson asked for sixteen squadrons, the air staff met to consider whether the RCAF required any of the 400 Hurricanes to be built at Fort William. Without committing itself, but 'in the light of the changed war development,' the staff 'was unanimously of the opinion that the air defence requirements of Canada now called for a minimum of not less than 12 fighter squadrons' with 432 aircraft, thus trebling the previous bid for 144 P-39s or P-40s.[48] Subsequently, on 2 March, the Air Council informed Power that the two coastal commands would require a total of ten Canso squadrons with 360 aircraft, which included ample numbers for reserves and wastage, as compared to the forty-five aircraft in the six existing flying-boat/amphibian squadrons. With the additional fighter squadrons proposed in February, this meant that the air staff was seeking to expand the Home War Establishment from nineteen squadrons to thirty to meet the enlarged threat. On 10 March the air member for accounts and finance, Air Commodore K.G. Nairn, informed the deputy minister that the home war personnel establishment as a whole would grow from 1613 officers and 14,300 airmen to 2313 officers and 21,006 airmen.[49]

These were substantial increases, but to the government they no longer seemed enough. Although the chiefs of staff concluded in mid-February that an invasion of either coast was not 'a practicable operation of war,'[50] a rising tide of public anxiety in British Columbia was difficult to resist. Ian Mackenzie, minister of health and welfare but more importantly the minister with political responsibility for British Columbia, complained bitterly to the prime minister about the sorry state of the air force in his home province.[51] In the Cabinet War Committee on 20 February Power 'questioned the soundness of a policy which would provide for the defence of Canada only in order that Canada should assist in the defeat of the major enemy. The defence of Canada,' he argued, 'should

surely be a primary objective in itself.'[52] Home defence was also the central issue discussed in a secret session of Parliament held on 24 February. The debate, Prime Minister King recorded in his diary that night, had 'served a useful purpose of giving something in addition in the way of information to members, and I think was helpful in bringing home to Ralston and the Defence Department the necessity of giving more attention to home defence, particularly on the Pacific Coast.'[53] A week later Norman Robertson and Hugh Keenleyside, officials of the Department of External Affairs, exchanged memoranda in which they contended that Japan could strike at British Columbia with relative ease. Canada, they agreed, should therefore look to its own security before sending any more men overseas. On 5 March, a Liberal Party caucus attended by the prime minister echoed these sentiments.[54] Misinformation, prejudice against the Japanese, and the string of disasters at Pearl Harbor, Hong Kong, Singapore, and the Philippines had undermined the politicians' confidence in military advice.

That same day the Cabinet War Committee decided to reinforce home defence rather than supplement its overseas forces. It reversed a decision made the month before to give the British half of the Canadian-built Consolidated Cansos then in production, and directed that initial aircraft go to six west-coast and four east-coast squadrons. Bolstered by General A.G.L. McNaughton's advice that public opinion should be considered in military decisions, the committee told the chiefs of staff to reconsider home defence requirements. On 9 March the RCAF began drafting a new air defence plan, and on 16 March the chief of the air staff submitted a proposal to increase the Home War Establishment to forty-nine combat squadrons. It was approved by the Cabinet War Committee after a perfunctory discussion two days later, along with a programme for a big expansion in the army at home which the chief of the general staff had prepared against his better judgment. The swift formulation of the forty-nine squadron plan represented a dramatic change in policy by the air staff and the Cabinet; as recently as January senior officials from the Department of Finance had strongly advised against a much more modest expansion.[55] Unfortunately, the main planning files kept by the air staff in Ottawa have disappeared, and it is difficult to understand whether the decision represents an independent RCAF reassessment of the threat, a fundamental judgment on the need to reorder and reorganize the air effort, or the product of political direction.

The weight of the available evidence suggests that the forty-nine squadron plan was a response to the perceived threat in the aftermath of Pearl Harbor. One other possible explanation, however, is that the air force intended that the additional squadrons should eventually go overseas. Power and Breadner (among others) had become annoyed at the Air Ministry's reluctance to have large numbers of Canadian squadrons established in the United Kingdom.[56] Forming these units in Canada, ostensibly for home defence, and then offering them for service abroad when conditions permitted was one way around the problem, and it may explain Power's careful words to the Cabinet War Committee on 18 March. Breadner's plan was 'elastic' enough, the minister remarked, to allow the squadrons to be 'used where they were needed.'[57] Air

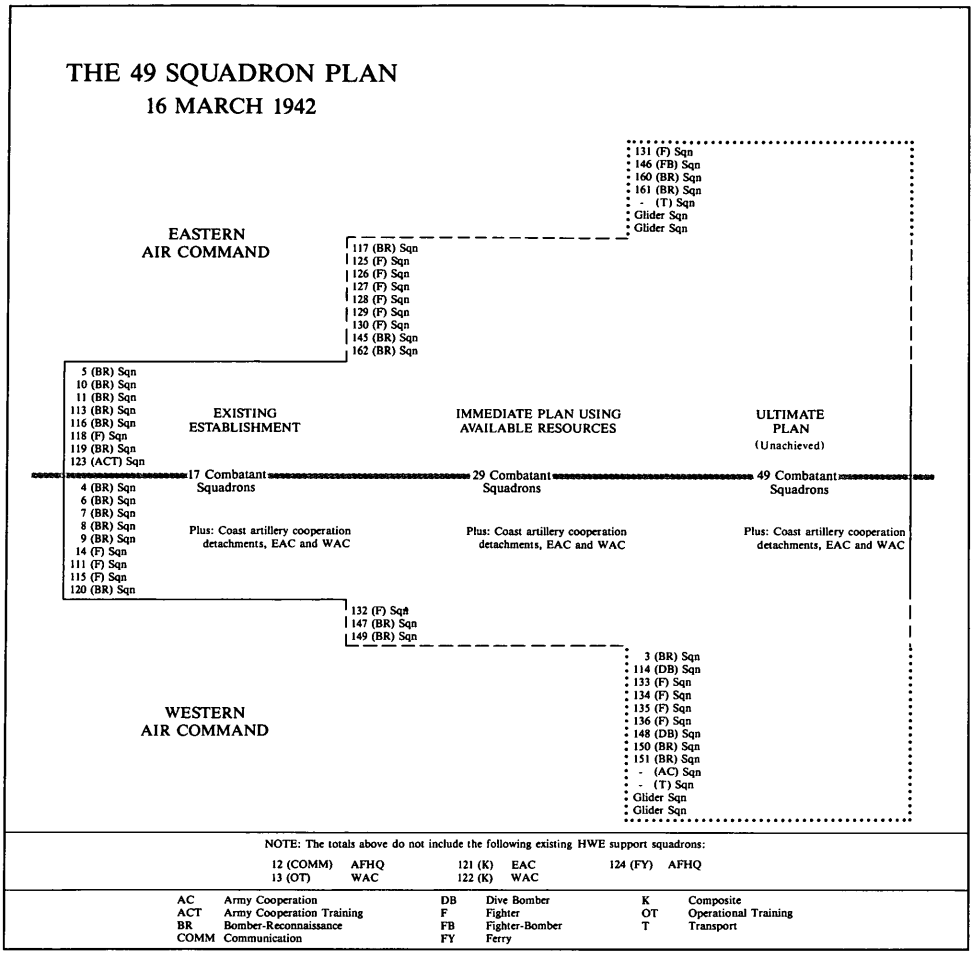
Commodore A.T.N. Cowley, air member for organization, certainly had this in mind a little over a month later. 'The greatest contribution Canada can make towards ultimate victory', he asserted, 'is to develop overwhelming air strength. But the role of schoolmaster and supplier of fighting men is not enough. Canada should fight – not as a part (however vital that may be) of the great RAF, but as a self-trained, self-equipped, self-controlled RCAF. To do this we must not only continue to train vast numbers of air crews but we must also complete their training through the operational training stage ... We must produce aircraft and engines in Canada. We must complete, equip, and train fighter, bomber, reconnaissance and army-co-operation squadrons, wings, groups, and commands so that as soon as is humanly possible Canada will have a powerful striking force which may be used either for the defence of Canada at home, or in any theatre of war.'[58]

Cowley's views were shared by Air Vice-Marshal Harold Edwards, air officer commanding the RCAF in Great Britain, a passionate nationalist who had told Breadner in February 1942 'that he was prepared to recommend that the RCAF withdraw from Air Ministry Control and that we organize our own air force the Joint Air Training Plan notwithstanding.' Edwards and others in the RCAF wanted a balanced Canadian air force overseas – undoubtedly subject to Allied command and control, but nonetheless recognizable as a national formation;[59] utilizing the Home War Establishment as the foundation for this national air force, if that was the air staff's motive, was not an unreasonable way to achieve it.

Breadner, however, argued his case on the basis of home defence. Canada was now exposed to threats more serious than the 'tip and run' raids that had previously governed the strength of the home forces:

> The changing war situation makes it expedient that Canada increase Air Defences to deal more effectively with the following dangers to the Supply Life Line to the United Kingdom and our own existence as a nation:
> a. greatly increased enemy U-boat sinkings of our merchant shipping in the Western Atlantic;
> b. possible enemy aircraft attacks on vital targets in East and West Coast regions;
> c. possible bombardment of East and West Coast ports by enemy naval ships; and
> d. possible invasion of Canadian Pacific Coast by enemy seaborne and air-borne forces.[60]

Believing the available forces to be entirely inadequate, Breadner proposed the formation of twelve new fighter and bomber-reconnaissance squadrons in the Atlantic region and eleven in the Pacific. In addition, he asked for fourteen night-fighter flights (one for each fighter squadron), an army co-operation squadron for Western Air Command, and two glider squadrons for each coast, one troop-carrying, the other for light tanks and Universal (Bren) carriers – these latter to permit the army to attack enemy lodgments on Canadian territory. Transport and utility/communications squadrons would bring the total to forty-nine, but that number could be increased to sixty-five by the addition of



four fighter and four bomber squadrons to each of the coastal commands if assistance from the United States could not be guaranteed in the event of an invasion.

This plan entailed the purchase of 380 Hurricanes (now apparently acceptable), 244 de Havilland Mosquito night fighters and bombers, twenty-four P-40 Kittyhawks, 144 Canso amphibians, forty Vultee Vengeance light bombers, two hundred gliders, and forty transports, at an estimated cost of $151 million. These were in addition to the aircraft that would be required to complete the current nineteen-squadron establishment. The plan also required the establishment or expansion of airfields and base facilities at Gander and Goose Bay in Newfoundland and Labrador; at Sydney and Stanley, NS; at Pennfield Ridge, Moncton, and Chatham, NB; at Saguenay, Que.; and at Prince Rupert and Vancouver, BC. The additional 989 officers and 11,347 airmen that would be required brought the total cost to about $216 million.[61] The government's quick agreement allowed Breadner to direct his staff to implement the progamme

forthwith. At the same time, as a measure of the graveness with which the air staff viewed the Axis threat, work proceeded on Plan 'Vanquo,' for the employment of BCATP schools, operational training units, and civil aviation in the last-ditch defence of the country.[62]

Within three months of the birth of the forty-nine squadron plan, the strategic situation on the Pacific changed dramatically. On 3–4 June 1942 the Japanese bombed Dutch Harbor on Unalaska Island in the Aleutian chain, and then occupied the even more remote and desolate islands of Kiska and Attu. Although the enemy's landings on United States territory caused great public alarm, his presence in limited strength 900 miles west of the Alaskan mainland was not a threat to continental North America. Most significantly, the Aleutian attacks were part of a larger operation that culminated in a decisive victory for the United States Navy over the main Japanese fleet in the Battle of Midway on 4 June.[63] The Japanese advance had been stopped and the Allies began to go on the strategic offensive; an invasion of the Canadian and American Pacific coast was now beyond the enemy's capacity. Although additional anti-submarine aircraft were urgently needed to meet the German U-boat offensive against shipping on the Atlantic coast, the procurement of very large numbers of other types of aircraft projected in the forty-nine squadron plan provided far more than 'a reasonable assurance' against any other form of attack 'likely to be made.'[64] Nevertheless, Air Force Headquarters was reluctant to reduce its expansion plan.

Implementing the plan was difficult, to say the least. Chronic shortages of aircraft, aero-engines, and spare parts continued, while, in the spring of 1942, there were still too few trained aircrew in the dominion to maintain the existing squadrons at full strength. The manpower problem was the easiest obstacle to overcome because it depended entirely on the quota of Canadian BCATP graduates allotted to home squadrons. The Air Ministry could hardly refuse Canada's request to revise article 14 of the BCATP Agreement when there was an acknowledged surplus of aircrew in England. Accordingly, when the question was raised at the Ottawa Air Training Conference in May, the British readily agreed that current regulations were 'not flexible enough' and raised the proportion of pilots posted to the Home War Establishment from 5.6 to 9 per cent of total BCATP output. The allocations of most other aircrew categories to Canada rose as well.[65]

The key provision in the revised BCATP Agreement was the linking of the total Home War Establishment allotment of aircrew to the number of aircraft that could be made available to the RCAF from all sources. Indeed, when Canadians first raised the question of amending article 14, the RAF air member for supply and organization, Air Vice-Marshal W.F. Dixon, asked for more details in order to 'assist the work of the Munitions Assignment Board.'[66] Here lay the RCAF's fundamental problem in carrying through expansion of the home air force. For although the RCAF was guaranteed more aircrew after May 1942, there could be no assurance that it would receive sufficient aircraft for forty-nine operational squadrons whether they were to serve at home or abroad.

The Munitions Assignment Board had been established shortly after the

United States' entry into the war as part of the formal Anglo-American machinery to co-ordinate the Allied war effort. Two Combined Munitions Assignment boards were created as a result of the 'Arcadia' conference, one in London, the other in Washington, and both were charged with the allocation of all the war matériel placed in common Allied pools according to strategic directives produced by the Anglo-American Combined Chiefs of Staff. Discussions on sharing aircraft from these pools took place in January 1942, and the resulting Arnold-Portal agreement – named for Lieutenant General H.H. Arnold, chief of the US Army Air Forces, and Air Chief Marshal Sir Charles Portal, the British chief of the air staff – set basic policy for dividing production between the United States and Great Britain. At that time the British also announced their intention to speak for all the dominions and to count allocations to them as part of the United Kingdom's share.[67]

From the British point of view the RCAF could have chosen no worse moment to ask for aircraft. The RAF was actively engaged all over the world and was already competing with the US army and naval air forces for American-made aircraft. Canada, by comparison, remained an inactive theatre whose large requirements seemed dubious. The British attitude is best illustrated by the Air Ministry's reaction to the forty-nine squadron 'Air Defence of Canada' plan forwarded from Ottawa in April 1942. 'In fact, Vancouver is fighting with its back to the wall,' one official observed drily; another made light of Breadner's assessment that Canada was vulnerable to attack. Of the four threats outlined in the plan only the first – 'greatly increased enemy U-boat sinkings of our merchant shipping' – was considered to be wholly justified. Inevitably, most Canadian bids for aircraft brought before the London assignment board from January to June 1942 were either ignored or rejected out of hand.[68]

All three Canadian services expected to suffer if the Americans and British controlled the distribution of Allied war matériel. As early as 29 January 1942, therefore, the Chiefs of Staff Committee urged the government to secure Canadian service representation on every assignment board. The Cabinet War Committee discussed the matter on 4 February but reached no decision, no doubt because Howe was unhappy with the idea. In his view Canadian participation on these boards would force the country to pool all domestic production, robbing the government of its right to determine the final destination of Canadian-made equipment. This would affect the army, which was to be supplied with Ram tanks manufactured in Canada, in particular. The RCAF's interests differed because the Home War Establishment relied almost exclusively on British and American aircraft. A formal request from the British and Americans for Canada to submit its total war production for allocation by the assignment board in either London or Washington arrived later in February. Howe objected once again, hoping that Canada could retain control over those items destined for the Canadian armed forces while pooling the rest. The British and Americans together opposed any such division of Canadian production, and when the differences could not be reconciled Ottawa did not insist.[69]

The government tried to protect the RCAF's interests. In mid-March the Cabinet decided to place Canadian bids for aircraft in Washington rather than

London, beginning that May. Past experience had convinced Power that the Americans were more likely to give sympathetic consideration 'to the needs of North American defence' than the British. At the same time the Cabinet wished to gain Canadian representation on the Washington assignment board and all its subcommittees; in the interim, the British would continue to speak for Canada in the American capital and allocate aircraft to the RCAF from their share.[70]

The Combined Chiefs of Staff wasted no time in clarifying their views. On 23 March their Directive 50/2 governing the allocation of war matériel rated the defence of North America among the lowest priorities. This meant that the European theatre, Hawaii, Australia, India, and Burma were all favoured over the RCAF Home War Establishment in competition for aircraft from the Allied pool. Prospects for completing the air defence of Canada plan grew still bleaker. Having discovered that their production would not meet the needs of the rapidly expanding US Army Air Forces or the naval air arm, let alone those of their Allies, the Americans imposed a virtual freeze on all aircraft shipments to Canada. The Air Council in Ottawa concluded forlornly that Canada 'would probably be required to accept what is available' rather than the desired numbers and types.[71]

Events in Washington bore out this gloomy prognosis. Taking into account the shortfall in US output, the Arnold-Portal-Towers agreement of 21 June (Rear Admiral John H. Towers, US Navy, represented the interests of American naval aviation) revised existing production-sharing formulae, making drastic cuts in the supply of American aeroplanes to the British Commonwealth.[72] A week later the American Joint Chiefs of Staff proposed an allocation that was eighty-five aircraft short of the RCAF's pre-March establishment, and over 500 below the figure set for forty-nine squadrons. This was significant, the Canadian air attaché in Washington discovered, because Arnold-Portal-Towers had also agreed that Canada came under American strategic control, which meant that the US Joint Chiefs' interpretation of Canadian requirements would carry great weight.[73] Finally, on 4 July, the Anglo-American Combined Planning Staff in Washington found that the US Army Air Forces would not meet their own goals with existing rates of production and decided that, apart from flying boats and maritime patrol aircraft like the Hudson, no American aircraft could be made available to British dominions within American spheres of responsibility.[74] That left out the RCAF, as well as the Australian and New Zealand air forces, despite the fact that under ABC-22 the United States had no right to assert its jurisdiction over Canada.[75]

So far as the Anglo-American Combined Chiefs were concerned, Canada could draw on its own production for the expansion of the RCAF. The Americans seem not to have realized, however, that Canadian industry was not producing aircraft of the types required for home defence because of previous agreements with the United Kingdom. Indeed, the Combined Chiefs' policy would have limited the RCAF's immediate expansion to nine squadrons – two Bolingbroke, four Hurricane, two Mosquito, and one Canso.[76]

The RCAF enlisted the support of the PJBD to challenge the Combined Chiefs' decision placing Canada under US strategic control. But although the senior

American army representative, Lieutenant General Stanley D. Embick, agreed with the Canadian interpretation of ABC-22, the PJBD was an advisory body only, and its recommendations could safely be ignored. They were. Breadner instructed Air Commodore G.V. Walsh, the RCAF attaché in Washington, to point out to the US joint staff that there was a direct threat to North America. Besides, when the Americans had asked for help in strengthening their Alaskan garrison the RCAF had responded willingly and quickly despite its paucity of resources. It was time, Breadner hinted, for the United States to return the favour. In his meeting with the American staff, Walsh also took a firm stand on the question of the strategic direction of Canadian forces, making clear that the Canadian government had never surrendered its sovereign right to exercise such control. The American officers, however, reaffirmed the US Joint Chiefs' intention to assess the merits of all Canadian defence plans through the Combined Munitions Assignment Board. Breadner asked Power to revive the question of securing Canadian representation on the board, but Howe remained adamantly opposed, arguing that any change in the status quo might jeopardize the placing of Allied orders with Canadian firms in the future.[77]

Breadner had little choice but to accept the US Joint Chiefs' evaluation of Canadian aircraft bids before they were passed to the Combined Chiefs and thence to the combined board.[78] With the US freeze on deliveries still in effect, and since the British would do nothing to strengthen the RCAF at the RAF's expense, the only way to ensure the supply of aeroplanes to Canada was to comply with Anglo-American assessments of Canadian requirements.

If ever there was a time for the air staff and the government to reassess the forty-nine squadron plan it was the period after July 1942. In view of the changed strategic situation and Anglo-American reluctance to fill large orders for the Canadian home air force, it would have been both politic and strategically sound for the RCAF to have restricted its demands to anti-submarine types for the Atlantic coast. Instead, the air staff clung firmly to its March 1942 appreciation.

The Canadian attitude contributed even further to Anglo-American scepticism about the RCAF's home war plan. In a study of the dominion air forces, JPS 37/1, that went to the Combined Chiefs of Staff on 3 August 1942, the American War Department joint staff planners readily admitted that the RCAF Home War Establishment would be an 'unbalanced force unsuitable for Canadian requirements' if forced to rely solely on domestic production. However, the planners thought this unimportant, concluding that the Canadians should be limited to twenty-eight home squadrons equipped with obsolescent aircraft unsuitable for other employment. The American commitment to the RCAF stood at sixty-one Hudsons and fifteen transports. They would allocate no fighters; moreover, they suggested that the RCAF should abandon its most recent claim to 167 Hurricanes from the Fort William, Ont., plant.[79]

These proposals were slightly modified. Air Commodore Walsh was able to inform Breadner that the RCAF could plan for a thirty-squadron Home War Establishment and that a final decision in Washington would be delayed until Ottawa replied. Breadner disagreed, and on his specific instructions Walsh protested to Brigadier General W. Bedell Smith, secretary to the US Joint Chiefs.

Walsh informed Smith that the American recommendations would force the RCAF to disband units which were already forming, and to undertake a complex reassignment of roles for squadrons on active service. Canada would have no proper striking force, no torpedo-bombers, and an inadequate fighter force. But Smith promised nothing, and Walsh warned Breadner that the Home War Establishment would never be able even to approach forty-nine squadrons. He nevertheless advised Breadner to insist that existing squadrons must be maintained at strength and provided with suitable aircraft.[80]

Breadner faced up to the inevitable and modified the forty-nine squadron plan. Walsh informed Air Marshal Douglas Evill, head of the RAF Washington delegation, that Canada's objective was thirty-five squadrons with a maximum of 575 aircraft: fourteen fighter or army co-operation squadrons equipped with Kittyhawks or Mosquitoes; twenty bomber or general-reconnaissance squadrons; and one dive-bomber squadron. This seemed reasonable to Evill, except for the large number of fighter squadrons, but he was in no position to help. The RCAF's option on British orders placed in the United States had been cancelled as a result of Canada's decision to enter its bids in Washington. The British could not support these requests, Evill explained, because the dominions came under American strategic control.[81]

The aircraft supply situation became still more difficult in September 1942. Because of fighter requirements for 'Torch' (the Allied landings in North Africa), the Desert Air Force, and the Soviet Union through lend-lease, the RAF was unwilling to allocate any Canadian-made Hurricanes to the RCAF. Since production at Fort William was scheduled to cease in April 1943, the RCAF seemed about to lose this one domestic source completely. Yet, as so often before, Air Force Headquarters willingly released 200 of these aircraft to the Air Ministry on the understanding that replacements from the United States would be made available in the spring of 1943.[82] Troubled by aircraft shortages so severe that they were reducing reserve and wastage rates for their formations overseas, however, the Americans anticipated no surplus for many months. In fact, Walsh reported in September that the US Joint Chiefs were about to reassess RCAF home defence requirements. Thirty-five squadrons might become twenty-five, or even fewer.[83]

Faced with this depressing news, Group Captain Heakes, now director of operations, examined the options open to Air Force Headquarters. If the RCAF accepted Allied advice and simply deferred its hopes for expansion until the supply situation was better, it would take months, perhaps years, before Canada had an adequate maritime patrol force, its most pressing requirement. Appropriating Canadian production, now including the Mosquito as well as the Lancaster, Hurricane, Bolingbroke, and Canso, offered no solution. Canada, which still manufactured no aero-engines, would surely be removed from the Allied pool. Increasing Bolingbroke and Canso production would add maritime-patrol aircraft (if engines were available), but it would not alleviate the fighter problem. The only solution Heakes could offer was for the government to continue to press for Canadian representation on the combined board in the hope that something better could be worked out there.[84]

Comments on Canadian requirements by Air Vice-Marshal Slessor, assistant chief of the air staff (policy) at the Air Ministry, did not ease the air staff's frustration. While admitting that Canada was 'not obliged to accept [American] estimates of her requirements,' Slessor nevertheless hoped that the dominion could be reconciled to American strategic direction of its forces. After all, every Allied power had accepted 'some abdication of sovereignty' for the common good, and Canada should not expect preferential treatment. Slessor also hoped that Canada would not seize its own production, which 'was ... primarily to meet the requirements of ... active theatres of war' and not for home defence in North America. Although the United Kingdom would not 'make a stand on any legal grounds' and had 'at best only a moral claim to certain aircraft now being produced in Canada, notably the Hurricanes,' Slessor held that the dominion should still pool all its resources for allocation 'according to the vital strategic requirements of the time.' It was unthinkable that the Canadian government would consider only its own interests and stand aloof from 'any arrangements for the coordination of the war effort.'[85]

Slessor's remarks thoroughly annoyed the air staff. Terence Sheard, air member for supply, complained to Breadner that the memorandum was 'rather irritating', in its 'old Colonial Office attitude.' There was a vast difference, Sheard noted, between 'abdicating sovereignty' while retaining a seat on the most important Allied planning and supply councils, as was the case with both Britain and the United States, and surrendering control without a voice. Sheard was confident that Canadian industry would eventually manufacture additional types of aircraft for the Home War Establishment, but at the moment the country needed 'immediate assistance' because of misplaced confidence in British promises to supply those types if Canada would concentrate on the production of others more urgently required by the RAF for the fighting fronts. 'The practical nullification of these undertakings,' Sheard warned, was about to lead to 'dangerous inadequacy in the equipment available for home defence.' This was essentially a government problem, but he feared the result if the politicians failed to press others to live up to their commitments to the RCAF.[86]

Group Captain Heakes was equally disturbed by Slessor's remarks when he met Air Marshal Evill in Ottawa. Looking for a better offer than that made by the American joint planners, Heakes told Evill that Canada was willing to let the British have 200 Hurricanes now if the RCAF could be certain of having sufficient other fighters on hand to maintain ten home defence squadrons at full strength at all times – in other words, rather more than 200 machines. Evill expressed his customary 'sympathy,' but emphasized Britain's greater need for fighters in more active theatres.[87] Heakes tried again two days later. The British first asked for all the Canadian-made Hurricanes without guaranteeing their replacement. Heakes countered that the fighters would be released if the Americans supplied a substitute. He also raised the possibility that Canada might seize all domestic production for the RCAF. This was a 'drastic solution,' he admitted, but it was justifiable on the grounds that 'overseas operations must be predicated upon the principle of [a secure] home base.' The British, however, ignored Heakes' threat and he retreated, convinced that Canada was 'a beggar at a rich man's table.'[88]

Heakes complained acidly to Breadner that 'we are being asked ... to accept some abdication of sovereignty determined for us by third parties without ourselves having a voice.' The British would not even admit that Canada had a home defence problem. 'Without intending to be critical,' he went on, 'I do not believe that until the fall of Burma and Singapore, the UK ever appreciated that Australia and New Zealand had a basic Home Defence problem.' This had been a 'fundamental error' in British reasoning, and it would not be repeated. Canada was not going to be unprepared, and her determination to be ready could not 'be lightly passed over by a senior partner who does not share that responsibility.'[89] Notably, however, Heakes made no comment on the changing strategic balance after Midway. The threat to Canada was diminishing daily, the sole exception being U-boat attacks on shipping in the western Atlantic.

Heakes was especially critical of the British position on Hurricanes. Howe had ordered 400 on his own initiative to keep the Canadian Car and Foundry plant open until it began producing more modern types. When the RAF displayed no interest in these early models, Howe intended to export them to China, until the RCAF submitted its claim. It was then, Heakes thought, that the British decided to ask for the fighters as part of their lend-lease contribution to the Soviet Union. In Heakes' view, the RCAF had acted first, and its claim was stronger. In fact, as the Department of Munitions and Supply knew, the Air Ministry had made a prior claim, and there was a moral commitment to deliver the aeroplanes to Britain. Heakes proposed drastic measures on 25 September. Despite the fact that no aero-engines were manufactured in the country, the director of operations declared bluntly that 'if there is no possibility of Canada obtaining representation on reasonable terms, I am firmly convinced that we must exercise firm control of the only weapon we possess, namely the production of our own industry.' Compromise would be possible only if 'the security of our country was not at stake.' Sheard agreed.[90]

Breadner presented these views to the minister that same day. He also told Power that the government had not done enough to secure Canadian representation on the assignment boards, and he wanted to be sure that the minister understood that even limited participation in the combined board was worth whatever effort was involved. 'Canadian production,' he explained, '... is in effect pooled now in the sense that it is very difficult for us to resist pressure for allocations to other theatres. This is particularly true when such pressure comes from the United States, as it is certain to do with respect to future deliveries of operational aircraft. I believe we would be in a better position to meet such pressure if it were channeled through an official body. Even if our representation were limited ... our representative would at least have some opportunity of scrutinizing requests, which is more than we have now.'[91] Canada would gain some leverage, however limited, and obtain a broader understanding of the allocation process and the dominion's place within it. Power took the case to Cabinet, where he found that J.L. Ralston now shared Howe's reservations about pooling production because representation on the board would gain nothing for the land forces overseas. The question was deferred and never raised again.[92]

By October 1942 Air Council realized that aircraft would probably never be supplied for a balanced air force in Canada. They also admitted for the first time that the strategic assumptions that underlay the scheme were no longer valid. Canadian bids would not be accepted 'merely on the distant theory of attack on our coasts,' and the limited expansion plan for 1943 was in jeopardy.[93] The American General H.H. Arnold, in a letter to Walsh in Washington, confirmed this view by urging that air force establishments in North America should be kept 'at the lowest possible minimum.'[94] Walsh continued to seek Air Marshal Evill's support, but the British airman echoed Arnold's remarks, pointing out that the Canadians might enjoy greater success if they showed a more realistic appreciation of the Allies' overall supply problems. Ten Hurricane squadrons (with 165 aircraft), five P-40 squadrons (with 87 aircraft), four Hudson squadrons (with 22 aircraft), six Bolingbroke squadrons (with 68 aircraft), and eleven Canso squadrons (with 267 machines) was the maximum Evill was willing to concede. Walsh seems to have been convinced that the RCAF must reduce its demands, especially as they related to reserve and wastage estimates, both of which remained substantially higher than those adopted by the British and the Americans for their operational squadrons overseas.[95]

Air Force Headquarters in Ottawa did reduce its demands, but not by enough. Aside from U-boat attacks on shipping, after all, the only potential threats were shelling by a pocket battleship on the Atlantic coast, or operations by a small carrier task force off British Columbia. Neither was particularly likely. More damaging still from the point of view of the RCAF's credibility, the number of squadrons the air staff wanted had risen to forty-three, of which fewer than a third were for anti-submarine operations off the east coast.[96] General Arnold suggested that thirty squadrons of all types might be too many.

The combined board's tentative allocations of mid-November, which were not then revealed to the RCAF, fell far short of Canada's stated requirements. As against Canadian requests for the delivery of 783 aircraft during 1943, the combined board allowed that 455 might be provided. The biggest cuts were in fighters: the air staff in Ottawa wanted 342; the board believed that 143 would be enough. Still, the allocations were larger than might have been expected. The Canadian air staff's persistence may have helped, but British influence is more likely to have made the difference. By late fall the Air Ministry was becoming increasingly worried that American insistence on Canadian industrial self-reliance would endanger British orders in Canada. For this reason Air Marshal Evill informed Walsh that Britain would support Canadian bids for a significantly increased share of American production.[97] At the same time, the Air Ministry wanted to renegotiate the terms of the Arnold-Portal-Towers agreement because American production had increased, and because it was taking longer than anticipated to find aircrew for the US Army Air Forces in Europe. The British succeeded, persuading President Roosevelt to put aside his policy requiring American crews to fly the majority of American-built aircraft. 'If you can get at the enemy quicker and just as effectively as we can,' he wrote to Churchill, 'then I have no hesitancy in saying that you and the Russians should have the planes you need.'[98] Freer access to American production would reduce

the RAF's need for Canadian-made machines, some of which the Home War Establishment could now use, and possibly persuade the British to release some American types to the RCAF. The combined board, however, was unwilling to grant Canada further concessions, and its January 1943 allocation to the RCAF simply repeated November's figures.

The air staff accepted the situation as gracefully as possible. Even if home defence squadrons remained short of fighters, the combined board's assignment of twenty Curtiss Helldivers would at least give the RCAF a dive-bomber squadron, while the 157 Lockheed Venturas allocated, although substantially fewer than the 288 requested by the RCAF, would be sufficient to form two new bomber-reconnaissance squadrons and modernize three others for both the strike role against enemy surface warships and anti-submarine duties. Eastern Air Command's most desperate need, however, was for additional maritime-patrol aircraft with much greater endurance than the Ventura. Deliveries of long-range Cansos from Canadian production, which were now beginning, would help, but there was an urgent requirement for very long-range [VLR] Consolidated B-24 Liberator four-engine bombers to counter the U-boats inflicting heavy losses on shipping south of Greenland. The RCAF had requested Liberators in a separate bid; these were undoubtedly the most important type that could be added to the Home War Establishment's inventory. Yet the air staff's only quibble with the combined board's decision was that it had not allotted more fighters.[99]

Given the virtual freeze on the delivery of American aircraft since May 1942 and the disappointing allocations since then, most of the Home War squadrons, other than anti-submarine units on the Atlantic coast, were only marginally better off in 1943 than they had been the year before. Eastern Air Command's priority made complaints from British Columbia inevitable. In June 1943, for example, the officer commanding 4 Group in Vancouver wrote to the air officer commanding Western Air Command pointing out that the air staff seemed to consider 'our line of defences as the Rocky Mountains and not the Pacific Coast,' and so was 'prepared to sacrifice the coast to the enemy and spend several years trying to dislodge him.'[100] Later that summer, and then again in the fall, the Joint Canadian-United States Services Committee, formed on the west coast to co-ordinate local defence planning, observed that 'A Japanese force consisting of an aircraft carrier, six or seven transports, possibly an army division with anti-aircraft and field guns, supported by one or two capital ships ... could quite easily launch an attack against the Queen Charlotte Islands and establish themselves and have sufficient equipment for their own protection to be able to construct aerodromes and operate aircraft at leisure in approximately three weeks.' The RCAF, if attacked, 'would have no alternative but to either endure the attack or evacuate the machines to an inland base or destroy them.'[101]

Subordinate regional headquarters were bound to focus on apparent local requirements, however extreme. But as Group Captain Heakes had reminded Breadner in October 1942, 'in matters of air strategy the local view must give way to the larger view.' This demanded a careful husbanding of the limited number of aircraft available. In addition, the Japanese had already been taught that they could not 'manoeuvre with impunity' and so were not expected to

undertake major operations against the Pacific coast.[102] This optimistic view was corroborated by the Anglo-American Combined Staff planners on 16 January 1943. Their analysis confirmed that an invasion of North America in force by either the Germans or the Japanese was entirely 'out of the question,' and as the PJBD had done before Pearl Harbor they discounted the possibility of raids by more than 500 men. The continued presence of Japanese forces on American soil in the Aleutians remained a concern, as did the enemy's capability of mounting 'an occasional carrier-borne raid on profitable objectives' including Vancouver and the 'military installations and bases in the Alaskan-North Canadian area.' The staff planners nonetheless concluded that there was no requirement to strengthen the forces available to defend the west coast.[103]

In February 1943 the Canadian Joint Planning Sub-Committee had reviewed its own estimates of the forms and scales of attack anticipated on the Atlantic coast and determined once again that the 'lack of Axis shipping and the relative strengths of the enemy and the United Nations Naval forces prohibit an invasion in force ... [or] a sea-borne raid on a large scale ... The losses which the enemy would suffer would be out of all proportion to any temporary advantages that they might expect to gain.' Smaller raids were possible, as were sporadic air attacks, but the major threat was under the sea.[104]

The growing concern over the success of German U-boats was reflected in the new Air Defence of Canada Plan submitted by Air Marshal Breadner on 20 March 1943. The 'maximum effort' was to be made on the Atlantic coast to assist the Royal Canadian Navy in its anti-submarine operations and to build up an air striking force capable of attacking enemy shipping. This meant bringing all existing squadrons up to strength and the formation of two of the Canso bomber-reconnaissance squadrons authorized the year before. So far as the fighter force was concerned, the two squadrons still waiting to be formed were to be held in abeyance 'because of a diversion of fighter aircraft to the United Kingdom for ... more active theatres of war,' because of the need to economize, and because there had been 'some reduction in the possibility of air attack.' The Mosquito night-fighter detachments called for a year before could be dispensed with altogether. On the west coast, the chief of the air staff noted, there had been considerable progress in the construction of bases, but little improvement in the command's operational capabilities. He therefore proposed to form one new reconnaissance squadron and two striking force squadrons there, one of which could be posted to Eastern Air Command as required. Air raids were still held to be a possibility, even if remote, and so one new fighter squadron should be brought onto the active order of battle. As on the Atlantic coast, the night-fighter flights could be dispensed with.[105]

The air staff had significantly scaled down the projected expansion of the home air force. Breadner, however, continued to think in terms of a forty-one squadron Home War Establishment, six more than the authorities in Washington had approved as an absolute maximum, with hundreds more aircraft than the most optimistic forecasts: 401 Cansos, 244 Mosquitoes, 214 Hurricanes, 157 Lockheed Venturas, 45 Kittyhawks, 25 Curtiss Helldivers, and 15 VLR Liberators. This was excessive in view of the latest assessment of forms and

scales of attack, and beyond the capacity of anticipated American production. Over the next few months the air staff reduced its bids for fighters while stepping up, with British support, the campaign for VLR Liberators and Ventura maritime-patrol aircraft. This made sense; the greatest contribution the Canadian Home War Establishment could now make to winning the war was protection of shipping in the north Atlantic.[106]

The authorities in Washington, even so, had another perspective. Canadian fighter bids were still regarded as excessive, and the request for maritime-patrol aircraft could not be filled either. The combined board offered only eighty-one aircraft for delivery in 1944, including just forty-three Venturas and no Liberators. These meagre numbers provoked a vigorous appeal from the Canadian air staff for 143 P-40 Kittyhawks (to replace the Lockheed P-38 Lightnings and North American P-51 Mustangs it had been refused), sixty additional Venturas, and a number of Liberators. The only additional offer from Washington was eighteen and perhaps as many as twenty-one Liberators for 1944. This helped, but the fact that the Ventura allotment for 1944 remained in doubt (the forty-three being supplied were for 1943) was particularly disturbing. Only the RCAF had been interested in this type when it was first placed in the Allied pool; however, when the British, Australians, and New Zealanders decided that they also wanted Venturas their higher priority meant that the supply to Canada had to be reduced. Air Vice-Marshal N.R. Anderson, the RCAF air member for air staff, thought that it was time for Canada to call in the British debt. A good many aircraft had been released to the RAF. Some reciprocity was called for.[107]

The air member for supply reacted to these developments by immediately preparing a new bid for forty-eight VLR Liberators (to replace the lost Venturas) and an additional fifty-two Kittyhawks. However, the Americans had already delayed the final promulgation of the 1944 allocation in order to accommodate the RCAF. They had made the supply problem as plain as possible and would not accept further delays. Sheard's request was ignored. Nevertheless, Walsh was soon able to report that additional Liberators might be obtained if they were requested separately from Canada's general bid. General Arnold had apparently agreed that, because of their experience in flying over the north Atlantic, RCAF squadrons should receive these aircraft before American units accustomed to operating further south. Air Force Headquarters gladly accepted the combined board's latest offer.[108]

Allied military successes through the rest of 1943 brought further changes in plans, especially after the last Japanese had been driven from the Aleutians in July. On 16 August the Combined Chiefs of Staff issued a new study of the scales of attack expected on North America (CCS 127/3) in which the threat to the east coast was considered to be very small. 'Submarine attacks on shipping and minelaying in the coastal zone' were 'continuing possibilities,' as were 'sporadic bombardment of shore installations' and the landing of 'commando raiders or saboteurs,' but 'only on a small scale.' Attacks by surface raiders were 'highly improbable' and air attacks even more unlikely. Scales for the west coast were generally similar, except that the risks of submarine operations were

smaller and those by shipborne aircraft comparatively greater. Both of these threats, however, were considered 'very unlikely.'[109]

When Breadner issued his appreciation for 1944, he observed that the RCAF had to take 'full cognizance of the necessity for economy at home' while providing forces 'adequate for the protection of the Dominion.' That meant that the air force could for the moment afford to give priority to its overseas effort, and thus make 'some deletions and other modifications' to the Home War Establishment.[110] Breadner's plan differed little from the Air Defence of Canada Plan already approved. The chief of the air staff judged that there could be no reduction in the seven anti-submarine reconnaissance squadrons in Eastern Air Command if daily sweeps and convoy escorts were to be maintained at existing levels. Nor could there be any reduction in the striking force which, though established to counter surface warships, in fact flew anti-submarine operations. Indeed, Breadner hoped that one of the four Hudson and Ventura squadrons might soon receive Liberators to strengthen Eastern Air Command's very long-range capability against both ships and U-boats. Similarly, the four fighter squadrons still on the east coast (two had been selected for transfer overseas) would remain on strength, although there could be some reduction in the size of the sector control staffs. The army co-operation squadron at Debert, NS, would proceed overseas, and the coast artillery detachments at Torbay, Sydney, Dartmouth, and Yarmouth could be phased out now that there were radars to assist the gunners.

For the west coast, Breadner now discounted the possibility of major Japanese operations and recommended reductions. Two bomber-reconnaissance squadrons would be struck off strength; the fighter-bomber unit planned for 1943-4 would not be formed; the army co-operation squadron could be converted to fighter, and the coast artillery co-operation detachment disbanded. The scheduled increase in maritime-patrol squadron establishments from nine to fifteen aircraft was cancelled, a move which decreased the planned anti-shipping force by the equivalent of two squadrons. Breadner nevertheless believed that some enemy activity had to be 'guarded against' by pushing patrols farther out to sea; presumably this would be possible because Western Air Command would receive modern aircraft in place of the obsolete Stranraers still flying. With three units approved for transfer overseas, Breadner would not consider reducing the fighter squadrons in the west below the current level of four, despite Japan's reverses in the Aleutians and the south Pacific. Accordingly, after some reorganization of the transport, communications, and composite squadrons, Western Air Command would be left with sixteen squadrons and Eastern Air Command with eighteen, one squadron less than the 1942 American recommendation of thirty-five.

The Cabinet approved and, as well, cancelled the Helldiver order and reduced the Canso order to 187. The government, which had tended to exaggerate home defence requirements, was now showing some support for the idea, taken up so recently by Breadner, that the highest priority should go to the RCAF abroad. When J.L. Ilsey, the minister of finance, suggested that personnel from disbanded units ought to be kept at home and released to industry, his colleagues

decided that they should instead be sent to Britain to reinforce the squadrons there.[111] Whether or not it had been intended by the air staff as far back as March 1942, Home War Establishment surpluses were helping to 'Canadianize' the RCAF effort overseas.

Since the beginning of 1943, Air Marshal Edwards, the air officer commanding-in-chief of the overseas air force, had been pressing for additional fighter squadrons. At this time the Air Ministry was forming new composite fighter groups to support the invasion of Europe, and Edwards wanted one of them designated RCAF to operate within the Canadian Army. Consequently, he advocated the diversion of RCAF Home War squadrons intact to No 83 Composite Group. To anticipate the more detailed discussion in the next volume of this history, six squadrons were dispatched overseas, beginning in October. They formed Canadian wings, but Edward's goal of a Canadian group was never realized.[112]

At the end of 1943 the air staff set the RCAF's needs at forty-four Liberators and 101 Venturas by the end of 1944. Concerned about the war at sea, the air member for supply drafted a telegram to Washington underlining the importance of the Venturas to the Allied anti-submarine campaign. Breadner, however, was satisfied that the Hudsons on strength could still effectively serve in the bomber-reconnaissance role. Venturas were in very short supply, and he was convinced that the need for them was greater in other theatres. The air staff accepted a reduction in the VLR Liberator allotment from forty-two to thirty-three, and the Ventura allocation was also cut. Air Commodore S.G. Tackaberry who, as senior equipment and engineering officer on the Canadian air staff in Washington, had laboured so long to acquire these aircraft, fought the reductions, but he was over-ruled by the new chief of the air staff, Air Marshal Robert Leckie. Tackaberry's complaint that the sudden cancellation of the request would be embarrassing in light of his campaign for the allocation was not persuasive. Leckie also cancelled Canada's bids for Lightnings, Hurricanes, Kittyhawks, and Mosquitoes, leaving only the Liberator and the Mustang. The latter, too, was subsequently dropped.[113]

Leckie had started to make far-reaching cuts in the Home War Establishment based on the improving strategic situation from the time he had first become chief of the air staff (on an acting basis) on 11 November 1943. Responding quickly to Allied victories over the U-boat fleet in the Atlantic during 1943, Leckie persuaded the Cabinet on 1 December to approve the disbandment of one east coast Canso squadron and the dispatch overseas of a second, thereby effectively reducing Eastern Air Command's Canso establishment by a third. Under his instructions, Air Commodore K.M. Guthrie, acting air member for air staff, reviewed the Air Defence of Canada Plan in January 1944 with an eye to further reductions.[114] Leckie refused to consider cutting yet another Eastern Air Command Canso squadron because of the continued U-boat threat to the Gulf of St Lawrence, but with this exception approved Guthrie's recommendations. As a result, four squadrons on the west coast (one fighter, two strike, and one Canso) and three on the east coast (two fighter and one strike) were disbanded in March-May 1944. The Western Hemisphere Operations [WHO] organization, as

the Home War Establishment had been renamed, now included twenty-five squadrons, twelve in Western Air Command and thirteen in Eastern Air Command (the Canso squadron that had recently gone overseas was still administered from Halifax, and therefore the command's order of battle nominally included fourteen squadrons).[115] Home defence veterans also substantially reinforced RCAF squadrons overseas in time for the Normandy landings in June 1944. Thus the Home War Establishment contributed to the development of a larger Canadian air force in the European theatre, even though the RCAF overseas remained under the operational command of, and integrated into, the Royal Air Force.

During September 1944 five more RCAF home squadrons disappeared from the order of battle,[116] though the air staff promptly cancelled the disbandment of a sixth, the last remaining strike squadron on the east coast, in response to revived U-boat operations in Canadian waters. By later that fall, with Allied armies advancing in Italy, northwest Europe, eastern Europe, and in the Pacific, the 'possibility of air attack on Canada's East Coast' was seen to have 'almost completely passed' and the threat from surface raiders had disappeared entirely.[117] The number of squadrons in the west fell to eight by 1 May 1945, and in Eastern Air Command to ten, seven of which were anti-submarine units, fully engaged in meeting the final U-boat offensive in the western Atlantic. All of these disappeared by 1 September 1945.

In purely military terms, the provision of adequate air defences for Canada was never a difficult planning problem. As the Chiefs of Staff Committee concluded in their periodic assessments, the danger was minimal: raids by 500 men at the most; bombardment by, at worst, a cruiser or pocket battleship; sporadic air raids by ship- or carrier-borne aircraft; and most dangerous of all (as it turned out), sustained submarine operations off the Atlantic coast and along the sea-lanes to Europe. Only during two periods – the summer of 1940 when Britain was in jeopardy, and the seven months after the Japanese attack on Pearl Harbor – were more serious attacks a possibility. Canada's needs, therefore, could have been met by a relatively modest home air force with a high proportion of maritime-patrol squadrons, as had been envisioned in prewar planning.

In making home defence policy, however, the air staff was subjected to pressures unrelated to the actual danger to Canada's coastlines. The RCAF's commitment in the fall of 1939 to the huge and unforeseen task of building the BCATP in Canada superseded existing plans and, given the dearth of resources available, threw into question how many squadrons could or should be raised for home defence, and how many for service overseas. Not until the latter part of 1943, moreover, after the war had clearly turned in the Allies' favour, was the air staff able to give considerations of military necessity precedence over political imperatives. The King government's predisposition to maintain large forces in Canada was reinforced by public alarm that major attacks were imminent, particularly after Pearl Harbor. Breadner's programme of 1940 for nineteen squadrons therefore grew in March 1942 to forty-nine with a potential for sixty-five. The air staff substantiated the expansion with inflated threat assessments and placed large aircraft bids against limited Allied supply pools,

infuriating the British and the Americans. If the air staff truly believed there was a valid military need for so large a home defence air force, their judgment was questionable. If they were carrying out the instructions of the government, their actions become more understandable. It is an air staff's responsibility to provide independent advice, however, and to propose alternate courses of action even while carrying out directions if overruled. There is no evidence of such advice.

The forty-nine squadron plan is the more remarkable because senior Canadian officers had shown calm and sound judgment immediately following Pearl Harbor. At that time, the chiefs of staff maintained their assessment of a modest threat to the west coast while the American army and army air forces exaggerated the danger and demanded excessively strong continental defences. By the summer of 1942, however, when the RCAF was proceeding with the vast expansion of the Home War Establishment, the US chiefs of staff determined they must concentrate their military resources overseas and convinced their government not to impose onerous home defence responsibilities. One reason that the air staff in Ottawa grasped strategic realities less surely than their American counterparts may have been that Canada had no voice in the higher direction of the war. The performance of the Canadian air staff may also have reflected the fact that the officers who rose to senior rank had not been properly prepared to organize, control, supply, and direct a large air force. That is always a danger when miniscule professional forces are compelled to expand quickly in wartime: no matter how earnest, hard-working, and determined the air staff officers may have been, their peacetime experience bore no relation to the demands made of them once the war began. Little wonder, then, that Air Force Headquarters at times seemed out of its depth.

Canadian airmen were caught between their government's insistence that Canada be well defended, their own aspirations to construct a respectable national air force, and the fact that they did not control the resources to meet either objective. Air Marshal Breadner could write seriously about building a forty-nine or sixty-five squadron organization at the same time that his staff scrambled to put twenty under-strength squadrons on operations. The air staff's policy was never wholly coherent, and the Home War Establishment was always very much the product of improvisation.

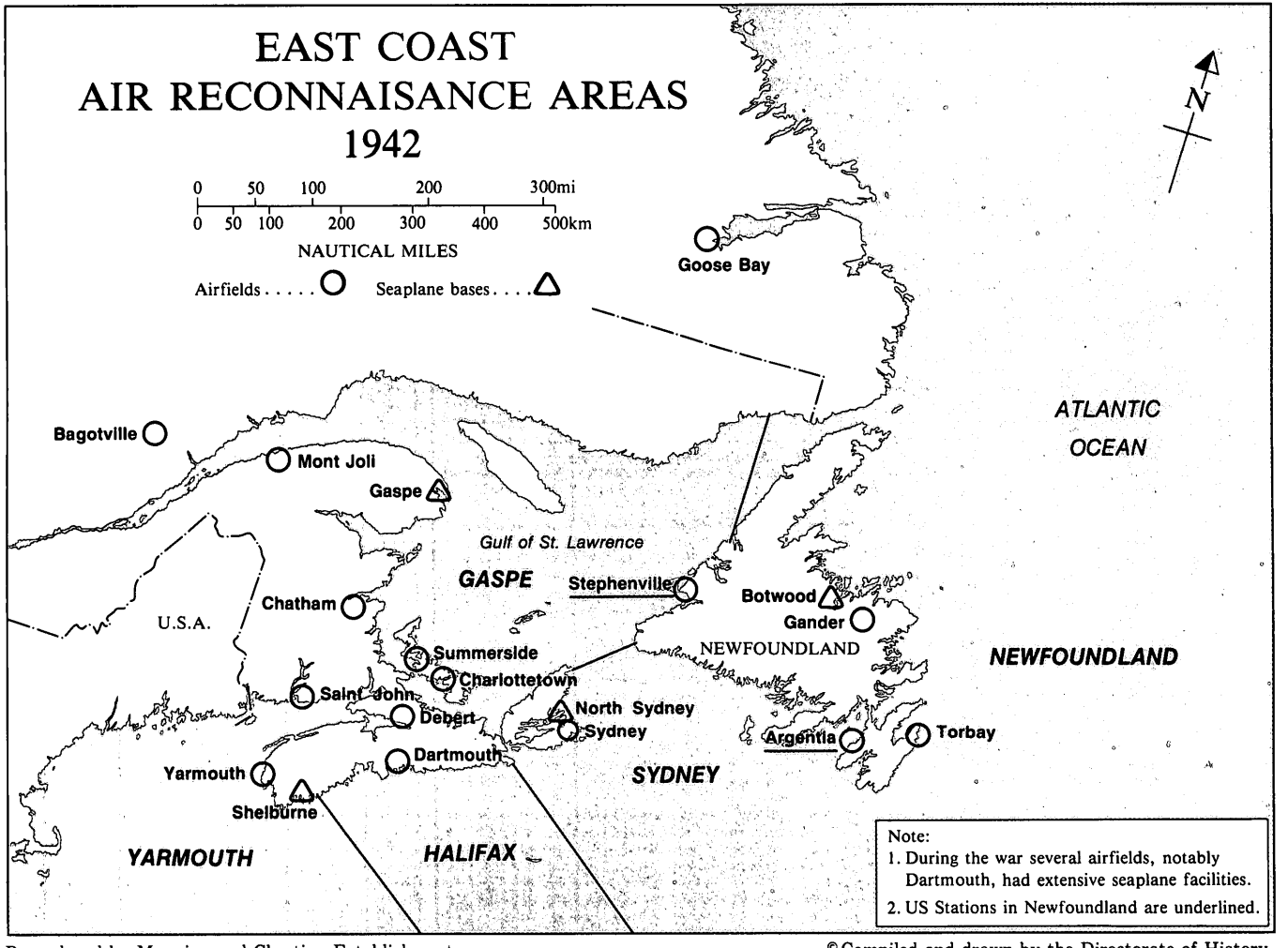
10
Eastern and Central Canada

Defending Canada with air forces was logical, but putting the idea into practice was not easy. In addition to the procurement problems described in the preceding chapter, the development of air stations, support services, and communications along the vast and rugged coastline was an enormous undertaking. The Joint Staff Committee at National Defence Headquarters, formed by the military heads of the three services, had defined the broad roles for the army, navy, and air force in the 1938 Defence of Canada Plan. Joint Service committees, comprising the senior army, navy, and air force officers in Halifax, NS, Saint John, NB, and Victoria, BC, co-ordinated local arrangements. They subdivided coastal zones for operational purposes and set down objectives for the forces involved. Permanent and auxiliary squadrons were allocated for war planning purposes to the commands and the army's mobile force. The air commands were to co-operate with naval forces in seaward defence and the protection of shipping, provide spotting aircraft to direct long-range fire by army coast artillery, and operate fighter squadrons for defence against air attack.[1]

Regional commands were established as the RCAF gained its independence from the army in 1938. Western Air Command came into being first, on 1 March, with Eastern Air Command following on 15 September.[2] Plans for the organization of a Central Air Command were never implemented. Air operations in central Canada, where the danger of enemy attack was minimal, remained under the general control of Air Force Headquarters.

The Munich Crisis of September 1938 shifted the focus of Canadian defence planning from the Pacific to the Atlantic coast, and brought a reallocation of squadrons to the Maritimes. Fortunately, site surveys begun in 1937 had identified several potential aerodrome locations in the region, and by January 1939 contracts had been signed for construction at Sydney, Yarmouth, and Debert, NS. The terrain was difficult, however, and none of these facilities was ready when war broke out.[3]

Partly because of the dearth of landing fields, only one permanent squadron, No 5 (General-Reconnaissance) at Dartmouth, NS, was at its war station at the end of August 1939. The others had to struggle east from various places across Canada. No 1 Squadron, with modern Hawker Hurricane fighters, staged smoothly from Calgary to St Hubert, Que., an interim base pending the



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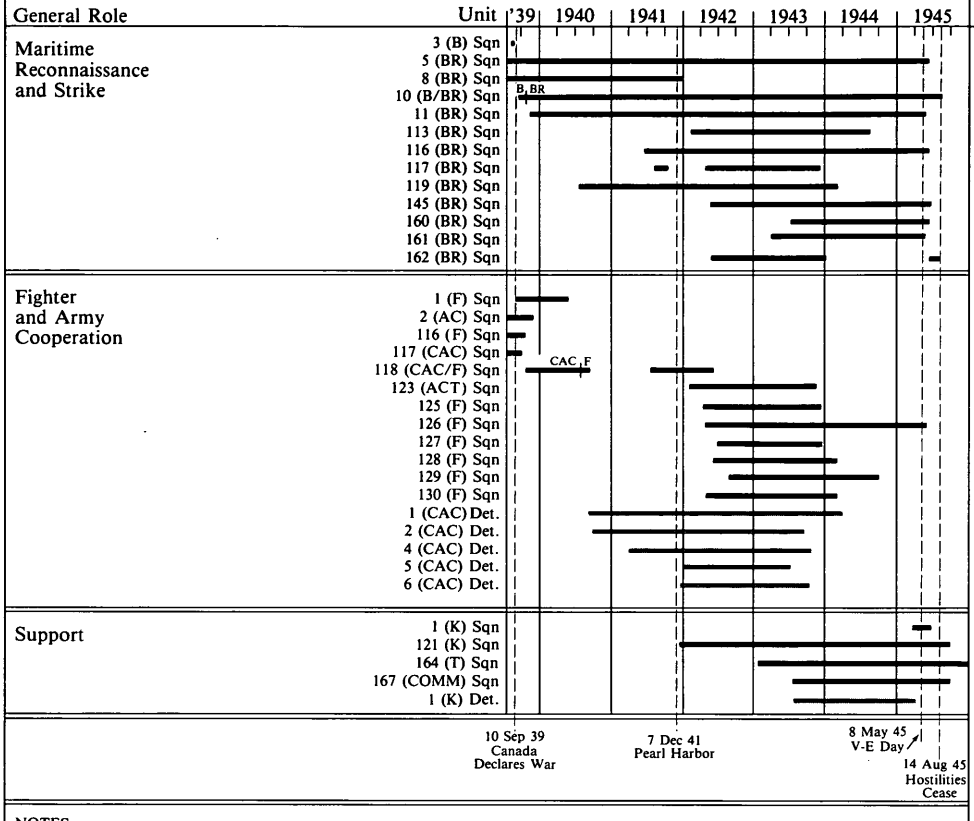
completion of the Dartmouth aerodrome. Nos 2, 3, and 8 Squadrons, with older equipment, found the going more difficult. Since Canada was still at peace, all three took the direct route to the coast over American territory. No 3 Squadron had the most trying experience. Its obsolete Westland Wapitis flew from Calgary to Halifax in short hops, half the aircraft reached their destination by 1 September, but engine trouble forced the others down in Millinocket, Maine. Two of the three aircraft had to remain there until repaired, which meant that if war broke out there was every chance they would be interned. Though serviceable on 3 September – the day that the United Kingdom, but not Canada, declared war on Germany – poor weather kept them grounded until the 4th. They finally reached Halifax two days later. The squadron had been disbanded the previous day, but the aircraft and personnel were reorganized simultaneously as 10 (Bomber) Squadron, and assigned to the striking force role against enemy surface ships.[4]

Eastern Air Command's area of responsibility was immense – from eastern Quebec to the seas beyond Newfoundland – and there were no obvious transit routes for enemy ships and submarines comparable to the Shetlands-Iceland gap or the Bay of Biscay in the northeastern Atlantic. From the outset, on the basis of plans first drafted in September 1938 as a result of the Munich Crisis, the command's operational zone was subdivided into four air reconnaissance areas, Saint John (later Yarmouth), Halifax, Sydney, and Anticosti (later Gaspé), to guard against shore bombardment by ships and naval aircraft (which in 1939 seemed to be the most serious threat) and attacks on shipping and shore targets by submarines.[5] A main aircraft base was planned for each area, but only Dartmouth seaplane station was ready, and only its long-time resident permanent squadron, 5 (GR), was fully operational.

As other units arrived on the east coast they had to make do with the scanty facilities immediately at hand. No 10 (B) Squadron and a flight of 2 (Army Co-operation) Squadron took up station at the Halifax civil aerodrome, while the remainder of the latter unit moved into the Saint John civil aerodrome. Much more trying was the experience of 8 (General Purpose) Squadron, the reconnaissance unit for the Gulf of St Lawrence, which had to create its own seaplane base at the mouth of the Sydney River out of nothing. 'Aircraft are moored over two miles from the Squadron H.Q.,' the unit diarist noted on 29 August. 'All property along shore line is privately owned and great difficulty is expected in being able to establish a base from which to operate. To date movement of personnel to and from aircraft has been made in small row boat hired from Mrs. Georgia Piercey, from her property. Commanding Officer spent many hours attempting to find accommodation for personnel, a suitable building for flight office and right of way to shore.' Finally, a few days later, the diarist was able to record: 'Permission to use field adjacent to aircraft mooring area obtained. House rented for use as radio room and flight office. Small motor boat with operator rented by the day.'[6] Only in mid-December, when the freeze up had ended float-plane operations for the season, could the squadron move to the new seaplane base at Kelly Beach, North Sydney, but because the hangars were still under construction the aircraft had to be stored in the open along the station road.[7]

EASTERN AIR COMMAND
ORDER OF BATTLE



NOTES:

1. The following Operational Training Units and General Reconnaissance Schools were also in EAC:

31 OTU (RAF)	Debert, N.S.	Coastal/Intruder	3 June 41 - 1 Jul 44	Became 7 OTU
34 OTU (RAF)	Pennfield Ridge, N.B.	Light Bomber	1 Jun 42 - 19 May 44	
36 OTU (RAF)	Greenwood, N.S.	Coastal/Intruder	11 May 42 - 1 Jul 44	Became 8 OTU
1 OTU	Bagotville, Que.	Fighter	20 Jul 42 - 31 Jan 45	
7 OTU	Debert, N.S.	Intruder	1 Jul 44 - 20 Jul 45	Ex-31 OTU
8 OTU	Greenwood, N.S.	Intruder	1 Jul 44 - 31 Jul 45	Ex-36 OTU
31 GRS (RAF)	Charlottetown, P.E.I.		20 Jan 41 - 21 Feb 44	
1 GRS	Summerside, P.E.I.		6 Jul 42 - 3 Feb 45	

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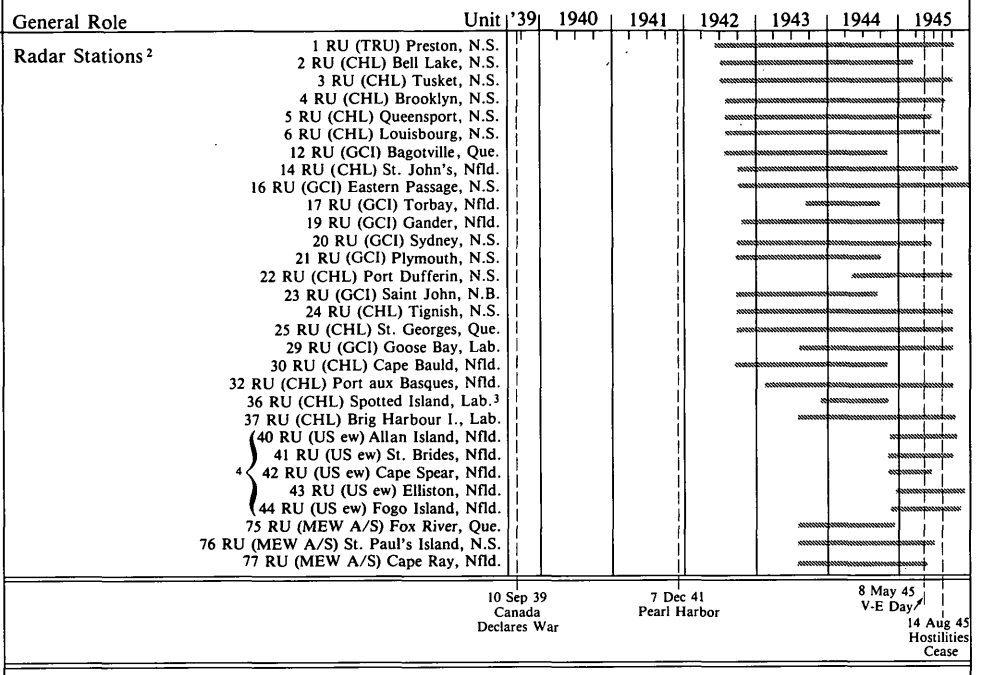
EASTERN AIR COMMAND
ORDER OF BATTLE



NOTES:

2. Radio Detachments, renamed Radio Units 1 Sep 44:

TRU	High-flying early warning radar
CHL	Chain Home Low-flying, early warning radar
GCI	Ground Control Intercept radar
MEW A/S	Microwave Early Warning Anti-Submarine, surface radar
US ew	American SCR 270/271, early warning radar

3. No. 36 RU was never operational.

4. Nos. 40-44 RUs were ex-US radar stations orginally established in 1942.

AC	Army Cooperation	CAC	Coast Artillery Cooperation	T	Transport
ACT	Army Cooperation Training	COMM	Communications		
B	Bomber	F	Fighter		
BR	Bomber-Reconnaissance	K	Composite		

Maritime defence, Eastern Air Command's principal task, required initimate co-operation with the RCN. In fact, as will be seen in Chapter 12, prewar British exercises in coast and shipping defence suggested that the responsible air and navy commanders should work together in a common operations room so there would be no delay in making a concerted response to enemy movements. Impressed by these developments, in May 1939 the Canadian Chiefs of Staff Committee had instructed the east and west coast commanders to select sites for combined operations rooms. However, the most suitable accommodation Group Captain N.R. Anderson, commanding Eastern Air Command, could find when he moved his headquarters from the original, temporary offices in late August was the Navy League Building, some two miles from HMC Dockyard. Neither Anderson, nor Commander H.E. Reid, his naval counterpart, would consider leaving his headquarters to work in a combined operations room located elsewhere. The only solution the air commander could offer was to build an entirely new air headquarters adjacent to naval headquarters at the dockyard, with the combined operations room located on neutral ground between the two buildings. Anderson was adamant; 'The individuality of the Air Command must be preserved by insisting on our own Headquarter's [sic] building with Flag Staff.'[8] The stalemate would continue for over three years, and it revealed attitudes that go far to explain the slow development of effective co-operation between air and sea forces in Canadian waters.

While the command staff settled into its new quarters, the squadrons quickly took up what became the home air force's pre-eminently important task: the defence of trade. When on 3 September 1939, the German submarine U-30 sank *Athenia*, a British liner, northwest of Ireland, the Admiralty immediately implemented prewar plans to sail north Atlantic shipping in defended convoys. At Halifax, the western terminus, the Royal Navy stationed major warships to sail as escorts against German surface raiders, while the RCN's tiny fleet supplied anti-submarine escorts in the focal area off Nova Scotia. RCAF aircraft flew patrols around the convoys to locate enemy vessels and assist the surface escorts in countering them.[9]

When the first HX (Halifax-United Kingdom) convoy put to sea on 16 September 1939, a pattern for the future was established. No 5 (GR) Squadron provided flying boats to search for submarines off Halifax harbour prior to the convoy's departure and an anti-submarine escort by day up to the limit of the Supermarine Stranraer's operational radius, approximately 250 miles seaward.

The term operational radius – also referred to as patrol range or effective range – requires some explanation because of its fundamental importance to maritime air operations. It was the distance from base at which an aircraft could linger for a useful amount of time to escort shipping or search for enemy vessels with enough fuel remaining for the return trip. Allowing a safety margin for headwinds and the possibility that deteriorating weather at base would force diversion of the returning aircraft to another station, the effective range was roughly a third – frequently much less – of the total distance the aircraft could fly without refuelling. The latter figure for a Stranraer carrying 1000 lbs of bombs was approximately 720 miles. As will be seen in Part IV of this volume, the weight of

armament and equipment and number of crew members significantly altered aircraft performance, while the difficult weather conditions on the Canadian coasts often greatly reduced operational ranges.

Flying patrols of five hours and thirty minutes each between dawn and dusk, the Stranraers accompanied all departing and incoming Halifax convoys. Towards the end of October, 5 Squadron also began daily harbour-entrance patrols. In these early operations the Stranraers proved to be sturdy and dependable, if somewhat out of date. At Sydney, the Northrop Deltas of 8 Squadron carried out reconnaissance patrols and supported convoys in the area,[10] though the use of these converted civilian machines was never considered more than a temporary measure.

By the end of September 1939 the maritime patrol squadrons of the Home War Establishment had undergone a change in designation. Existing nomenclature, borrowed from the RAF for the most part, included 'Bomber,' 'Torpedo Bomber,' 'General Reconnaissance,' and 'General Purpose' squadrons, reflecting the functional specialization possible in a large air force. These terms were now replaced with the broader and uniquely Canadian designation 'Bomber Reconnaissance' or 'BR,' which more accurately described the various tasks carried out by each of the RCAF's small number of maritime squadrons.

Nos 5 and 8 (BR) Squadron were the only units in eastern Canada equipped to undertake the vital maritime reconnaissance role. When 1 (Fighter) Squadron's short-ranged Hurricanes moved from St Hubert to Dartmouth airfield in November, they were employed in coastal sweeps, the occasional patrol for convoys close inshore, and dive-bombing exercises with army batteries and naval anti-aircraft gunners. Earmarked for attachment to the army's mobile force, 2 (AC) Squadron was replaced at Halifax by the embryonic 118 (Coast Artillery Co-operation) Squadron, which joined the command from Montreal on 23 October 1939. Taking over 2 Squadron's aging Armstrong Whitworth Atlas aircraft, No 118's nucleus was reinforced by personnel transferred from other units and, on 28 October, the squadron's 'A' Flight was ready to begin operations. In the meantime, 10 (BR)'s Wapitis had proved so unsuitable for maritime reconnaissance that the squadron seldom flew operations.[11] It was undoubtedly a blessing that the first German incursion into the northwest Atlantic, the pocket battleship *Deutschland*'s cruise to the south of Greenland in October, never came within range of land-based aircraft.

The arrival of 11 (BR) Squadron at Dartmouth on 3 November added significantly to the command's capabilities. Organized at Ottawa the preceding month, the unit had been equipped with ten Lockheed Hudsons as they were delivered from their American manufacturer. These were the east coast's first modern maritime-patrol aircraft, with a maximum speed of 230 knots, as compared to the Stranraer's 130 knots, and an effective range of 350 miles. The re-equipment of 10 Squadron with Douglas Digbys was a further, major improvement. In December 1939 the squadron sent a detachment to St Hubert, Que., to begin conversion training as the aircraft started to arrive from the United States. The detachment moved to Dartmouth in April with the first five Digbys, and in June the whole squadron deployed there; Halifax municipal airport,

whose runways were beginning to break through and cause damage to aircraft, ceased to be an RCAF station. With the Digby, which could patrol to ranges of over 350 miles and remain airborne for some twelve hours (the Hudson's maximum endurance was about seven hours), 10 Squadron was finally able to take up its role as the east coast strike force.[12]

Accelerated construction programmes had greatly expanded ground facilities by the late spring of 1940. The Dartmouth aerodrome, which included a repair depot, was fully operational; the aerodrome at Yarmouth would soon be able to receive aircraft; and although the runways at the Sydney aerodrome would not be ready until the end of the year, the new buildings at the North Sydney seaplane station were virtually complete. Other new facilities included an equipment depot at Moncton, NB, and an explosives depot at Debert, NS.[13]

Additional support services were also organized, or grew in scope. The small clutch of RCAF marine craft on the east coast prior to the outbreak of war had been augmented by at least nine vessels thirty-five feet in length and larger for transporting equipment and supplies. In addition, six high-speed rescue launches had been ordered for service on both coasts.[14] Another requirement, which had been provided for in prewar planning, was to arrange for civilians to notify the air force of any unusual activity in the air or at sea. These reports, particularly in the years before coastal radar stations were established later in the war, might have been the only early warning of an attack. Organization of the Aircraft Detection Corps began in May 1940, Eastern Air Command being responsible for the area east of the 100th meridian, which runs through Manitoba, and Western Air Command for the rest of the country. Staff at the command headquarters contacted civilian volunteers, who served without compensation, distributed literature on aircraft recognition, and arranged for local telephone companies to route reports to RCAF stations.[15]

Eastern Air Command's responsibilities, however, would continue to grow, and at a faster rate than the improvement in its capabilities. Although the Canadian government had specifically forbidden the military to discuss joint defence measures with Newfoundland before the war for fear that these would escalate into broader imperial commitments, Ottawa began to assume some responsibility for the island's security during the first eight months of hostilities, a natural development in view of Newfoundland's geographical position astride the air and sea routes to Canada's Atlantic coast. On 4 September 1939, two Deltas from Sydney made a reconnaissance of the south coast of Newfoundland at the request of the Royal Navy, and during the next two days the governments in St John's and Ottawa agreed that the RCAF should have free access to Newfoundland's air space and ground facilities. By 13 March 1940 the Canadian Cabinet was finally persuaded by British and Newfoundland arguments that the Canadian Army should provide coast guns to protect Bell Island in Conception Bay, the source of iron ore for the steel industry at Sydney, NS. Meanwhile, the RCAF and the authorities in St John's began to make arrangements for Eastern Air Command to station aircraft in Newfoundland.[16] In the event, a substantial Canadian commitment was to come much sooner than anyone had imagined.

The German conquest of France and the Low Countries in May-June 1940 increased the possibility of attacks on the Canadian Atlantic coast at the very moment the United Kingdom, now isolated and subject to invasion, urgently needed all possible assistance. The effects of the disasters in Europe on Eastern Air Command were sudden and far-reaching. Concerned that the Germans might seize Newfoundland Airport at Gander, thereby gaining control of the island's communications and acquiring a base for air strikes against the Canadian seaboard, on 27 May 1940 the Joint Service Committee Halifax urged that a detachment of 10 Squadron be sent there immediately.[17] The authorities in Ottawa and St John's agreed, and five Digbys landed at the airport on 17 June. In addition, the chiefs of staff planning subcommittee recommended sending a flight of fighters when suitable aircraft became available, as well as committing an infantry battalion for the ground defence of the airport and the seaplane anchorage nearby at Botwood.

The RCAF also rushed Home War Establishment aircrew and aircraft overseas. No 1 (F) Squadron, after amalgamation with 115 (F), left for England complete with Hurricanes and other equipment in June. This matériel was hastily crated by Dartmouth groundcrew, who also dismantled and loaded American aircraft aboard the French carrier *Béarn*. She sailed on 16 June, with RCAF personnel still working aboard, only to dock at Martinique after the French collapse. It took several changes of vessel before the RCAF party could get back to Halifax in mid-July.[18]

The departure of 1 (F) Squadron left the east coast with no fighter aircraft, forcing the Hudsons of 11 Squadron to fill the gap despite their unsuitability for this role. In early August, 118 (CAC) Squadron was redesignated as a fighter unit with the intention of posting most of its experienced personnel to new coast artillery co-operation detachments, and then bringing the squadron up to fighter strength. The conversion did not take place. No 118 broke up in late September, its flights becoming coast artillery co-operation detachments at Saint John, NB, and Halifax. No 11 Squadron's Hudsons had to continue as substitutes for fighter aircraft in the Halifax area until July 1941 when a reconstituted 118 (F) Squadron, flying obsolete Grumman Goblin biplanes, arrived in the command.[19]

The drain on Eastern Air Command's resources during the spring and summer of 1940 included maritime-reconnaissance bombers, at a time when its commitments to the defence of shipping were increasing. Thirteen Bristol Blenheim IVs, earmarked to replace 8 Squadron's Deltas, arrived from their British manufacturer, but were immediately returned to the United Kingdom where they were desperately needed. In July 8 Squadron lost its Blenheim/Bolingbroke training detachment to 119 (BR) Squadron, a new unit scheduled to move to Yarmouth, NS. At the end of the month 8 Squadron's 'A' Flight was then uprooted from North Sydney to Dartmouth to make room for a detachment of 5 Squadron Stranraers; a new series of slow transatlantic convoys started sailing from Sydney in mid-August and the Stranraers were needed to fly escort missions beyond the short reach of the Deltas.[20]

Despite the setbacks resulting from the crisis in Europe, Eastern Air

Command continued to expand. Air Force Headquarters responded to pressing aircrew shortages by giving the east coast priority over the west for recent graduates from training and by posting some personnel from Western Air Command to squadrons in the Maritimes. Deliveries of Digbys from the United States brought 10 Squadron up to full strength – fifteen aircraft – by August, and Canadian-built Bristol Bolingbrokes, a variant of the Bristol Blenheim twin-engine bomber with an effective range of about 200 miles, became available in numbers. Thus, 119 Squadron at Yarmouth reached its establishment of fifteen aircraft during the fall, and 8 Squadron began to rebuild in December, receiving its first Bolingbrokes while moving from Dartmouth and North Sydney to the new Sydney aerodrome.[21]

During the summer of 1940 the Canadian government and the armed forces also made more comprehensive arrangements for the defence of Newfoundland. The army created a new Atlantic Command on 1 August 1940 that embraced the island, Labrador, the Maritime provinces, and eastern Quebec. Later that month, the new minister of national defence for air, C.G. Power, the new chief of the air staff, Air Vice-Marshal L.S. Breadner, and the east coast commanders met in St John's with the governor and his officials, described the defences Canada was prepared to provide, and won agreement that Newfoundland's military forces would be placed under Canadian command. On 28 August the Joint Service Committee Halifax was redesignated the Joint Service Committee Atlantic Coast and its responsibilities extended to Newfoundland and Labrador. As a result of the subsequent expansion of the Canadian effort, on 4 July 1941 the commanders of the three services there formed the Joint Service Sub-Committee Newfoundland which reported to the JSC Atlantic Coast.[22]

The revised Defence of Canada Plan of August 1940 sought to strengthen the command structure in the Atlantic region. Unlike the plan of 1938-9 that had merely alluded to the desirability of close co-ordination among the three services, the 1940 version directed the army, navy, and air force commanders at Halifax to establish a joint operations room and to exercise collective as well as individual control over their commands.[23] None of these measures provided for unity of command – one service designated to exercise control over the other two – because this was alien to Canadian doctrine and practice; the Canadian Army, Royal Canadian Navy, and Royal Canadian Air Force insisted that they could achieve the desired degree of co-operation without the formal subordination of two of them to a third. As we shall see, however, it was not always possible to suppress service independence or to quell interservice rivalries simply by redrawing the organization charts to include joint service committees and joint command facilities. In Halifax, most notably, disputes over the location of the combined operations room continued to prevent its realization. Close, harmonious, and effective co-ordination of effort among the army, navy, and air force was discussed much more frequently than it was achieved.

Canada was not alone in its concern for the security of the east coast. The defence of the western hemisphere against incursions by overseas powers was an historic and fundamental American concern. Even though the United States was not at war her leaders were determined that a potentially hostile power should not

gain a foothold in the Americas. President Roosevelt and Prime Minister Mackenzie King agreed that their two countries should co-operate in the defence of North America at the Ogdensburg summit of 17 August 1940 and, in the first two meetings of the Permanent Joint Board on Defence held on 26-7 August, attention quickly focused on the Atlantic. Representatives from both countries urged the strengthening of defences in the region, agreeing that the United States would make available urgently needed coast artillery and anti-aircraft guns (to be manned by Canadians) and that the Americans would be prepared to operate in the Maritimes and Newfoundland in the event of attack. Canada was to increase its garrison in Newfoundland and to prepare facilities there and on the mainland for use by American forces if an attack was imminent. These responsibilities were defined more precisely in the Joint Canadian-US Basic Defence Plan of October 1940 – the so-called 'Black Plan' – which postulated a German victory over Britain, the disappearance of the Royal Navy as an effective fighting force, and a concerted Axis effort against North America. Canadian authorities did not envisage that American troops would be stationed in Newfoundland or on Canadian territory except in a crisis, and at no time considered leasing or selling bases to the United States.[24] Indeed, as 1940 drew to a close and Hitler still had not crossed the English Channel, Canadian attention began to shift away from home defence to operations overseas.

Although the United States lent increasing assistance to Great Britain, its main interest was in strengthening and extending hemispheric defences. Accordingly, the British and Americans entered into an agreement which offered the United States a ninety-nine year lease on bases in Newfoundland. Not anxious to see a permanent American presence on the island, Canadian leaders and officials, like some Newfoundlanders, were wary of the arrangement. Nevertheless, when the first US troops arrived in January 1941 they did so without incident, while an Anglo-Canadian-American protocol signed in London on 27 March indicated Canadian acceptance of the situation.[25] The Canadian government remained suspicious of American intentions, however, and watched developments closely as the strength of US forces in Newfoundland grew steadily after April 1941. Canadian service personnel were similarly cautious despite the outwardly cordial working relationships they developed with their US counterparts.

The underlying tensions were particularly evident during discussions about Canadian-American command relationships in the spring of 1941. Two plans were being drafted. 'Joint Operational Plan No. 1,' which implemented the 'Black Plan' of October 1940, was to come into force if the United Kingdom fell and a major assault on North America was imminent. Under these desperate circumstances, the Canadian government agreed, the chief of staff of the United States Army could, with Canadian consent, exercise 'strategic direction' over Canadian land and air forces. The 'Joint Operational Plan No. 2' was an entirely different matter. Based on the assumption of Britain's survival, the plan was to come into effect when the United States entered the war to join the Commonwealth in striking back at the Axis powers. British and American military staffs had laid the groundwork for this contingency in meetings at Washington in January-March 1941 that resulted in the 'ABC-1' plan. Accord-

ingly, the ancillary Canadian-American 'Joint Operational Plan No. 2' became known by the short title 'ABC-22.' Because ABC-22 would take effect when the threat to North America was much less grave than that foreseen in the 'Black Plan,' the Canadian Cabinet and chiefs of staff stoutly resisted determined American efforts to include the provision that the US chiefs of staff would exercise strategic direction over the Canadian forces. The issue caused some bad moments in the PJBD, but in the end the Americans relented. Under ABC-22, which received President Roosevelt's approval on 29 August 1941, and that of the Canadian Cabinet on 15 October, Canadian and American forces were to work together through 'mutual co-operation.'[26] Command relationships in Newfoundland and on the Canadian Atlantic coast, however, continued to cause serious difficulties until the creation of the Canadian Northwest Atlantic theatre of operations in 1943.[27]

Despite these disagreements, US help was welcome since the threat was very real. German surface commerce raiders had broken into the Atlantic again in the spring and summer of 1940, and on 5 November the pocket battleship *Admiral Scheer* encountered convoy HX 84 in mid-ocean, sinking five out of thirty-seven ships and HMS *Jervis Bay*, an armed merchant cruiser that was the sole escort. While *Scheer* moved out of range, aircraft from Sydney and Gander flew extensive but fruitless searches to locate the raider.[28]

This great sea drama, and its grave implications for the north Atlantic convoy routes, receives less attention in the records of Eastern Air Command than the practical day-to-day problems of airmen in the region. Still struggling with inadequate facilities, they had a natural tendency to be preoccupied with domestic problems. The inhospitable environment seemed to be the enemy. Airmen were in constant contact with it, closer to hand and much more persistent than the occasional German predator far out at sea. On 24 October 1940 Sydney's war diarist recorded, for example: 'At 2300 hours three shots were heard near the D.F. [direction-finding] Station and on investigation it was found that two guards had mired in the mud up to about their waists and were helpless, not being able to extricate themselves. They had fired all their shells, 10 rounds, and only the last three were heard. It was necessary to dig them out and they were put in hospital suffering from shock and exposure.'[29] Such were the daily realities of war.

Poor operating conditions could not, however, explain the command's dismal performance when enemy warships lingered within range for the first time. On 22 February 1941 the Digbys of 10 Squadron's 'A' Flight at Gander were searching for the crashed Hudson in which Sir Frederick Banting, the Canadian co-discoverer of insulin, lost his life. While some of the aircraft were still airborne, word arrived that the German battlecruisers *Scharnhorst* and *Gneisenau* had sunk five ships recently dispersed from a westbound convoy 500 miles east of Newfoundland. The Digbys had to refuel, and night fell before they could take off. The next day the raiders steamed out of range. On 15-16 March they returned to a position about 350 miles southeast of St John's, sinking or capturing some sixteen vessels from two convoys.[30] Two Digbys, en route to join the outer, or southerly, convoy learned from an armed merchant cruiser that

an attack was in progress. In spite of this warning, 'both aircraft flew away without bothering to learn the position at which the shelling was taking place and, to make matters worse, proceeded to escort the wrong convoy [already escorted by a capital ship] with the result that several ships of the unescorted *outer* convoy were sunk and the R.C.A.F. failed to locate the two large raiders, a few miles away.'[31] *Scharnhorst* and *Gneisenau* withdrew unscathed and made for Brest, France.

The failure to press on towards the enemy and pass appropriate information was a grievous error that raises questions about the training of the air crews and the efficiency of the ground staff who had briefed them. Perhaps the routine of flying patrols in a theatre which experienced only rare and fleeting enemy encroachments had dulled operational perspectives and readiness. In that case, commanders at all levels had not exercised proper leadership and supervision. If senior commanders took prompt corrective action, no record has survived. Ten months later, however, a similar but much less serious failure by 10 Squadron aircrew to communicate with an American warship brought Eastern Air Command headquarters to recall the earlier incident and censure the station commander, his briefing officers, and the Digby pilots.[32]

The U-boat campaign was also moving westward and gaining in strength. The summer and fall of 1940 had brought German submariners their first 'Happy Time,' when packs of U-boats prowling the surface struck with impunity at mercantile convoys close in to the British Isles. British countermeasures, principally the extension of air and naval anti-submarine escort to mid-ocean, sharply checked German successes in the early months of 1941, but the increasing effectiveness of defences in the eastern Atlantic assured the continued westward migration of German attacks.

In March the Admiralty warned the Canadian authorities about the possible extension of the submarine war into the western Atlantic and enquired as to the strength of the available defences. The RCAF took the opportunity to once again raise the need for longer range aircraft on the Atlantic coast. Although the PJBD had recommended at its first meeting in 1940 that Canada receive twelve Consolidated PBY (Catalina) flying boats, subsequent Anglo-American discussion had reduced the number to six and then disagreements over allocation of the aircraft stalled delivery. By March 1941 none had yet arrived, nor were any deliveries from the RCAF's own contracts with Consolidated, and with Boeing in Vancouver (the Canadian builder), expected before the autumn. The British enquiry into Canadian preparedness now allowed the chief of the air staff, Air Vice-Marshal Breadner, to inform the Air Ministry that the RCAF needed three additional long-range squadrons of twelve flying boats each in order to meet its responsibilities. For the moment, the campaign for Catalinas rested there. In the meantime, Air Commodore Anderson proceeded overseas in early April for three months' duty with Coastal Command to learn first-hand of the latest methods and equipment.[33]

As spring approached, Eastern Air Command prepared to cover the Gulf of St Lawrence during the navigation season and to meet increased enemy activity in the northwest Atlantic. By mid-March the RCAF had established an advanced

landing ground and refuelling base at Mont Joli, Que., which would be available to support operations in the upper Gulf. So serious was the shortage of combat aircraft, however, that an operational detachment could not be stationed in the region, either at the new aerodrome or the flying-boat base at Gaspé, during the 1941 season. For improved coverage of the ocean routes north and east of Newfoundland, in early April the main body of 10 (BR) Squadron moved from Dartmouth to join the unit's 'A' Flight at Gander. Nos 5 and 11 (BR) Squadrons carried on at Dartmouth, backed by a small detachment of two 119 Squadron Bolingbrokes from Yarmouth. At the end of May, 5 Squadron dispatched three Stranraers to the North Sydney seaplane station to assist 8 Squadron's Bolingbrokes at the Sydney aerodrome in escorting convoys and patrolling the Cabot Strait as navigation began in the area.[34] These were timely changes, but pitifully inadequate.

By early May the Germans, searching out the extended limits of British sea and air escort, were attacking convoys west of 35° west. On 20 May, the day convoy HX 126 was heavily attacked 680 miles east of Newfoundland, Air Commodore A.E. Godfrey, who commanded Eastern Air Command during Anderson's absence overseas, pressed again for immediate delivery of Catalinas. His plea was strengthened by the fact that a number of these aircraft were lying idle in the United States and Bermuda waiting to be ferried across the Atlantic. The next day, the command learned from the navy that bearings on German radio transmissions placed a U-boat at 55° north, 50° west – just barely within reach of RCAF aircraft at Gander. The aircrew of 10 Squadron pushed their Digbys to extreme range, over 500 miles, but at this distance from base were able to patrol only briefly over the suspected area. Godfrey immediately reported these developments in another bid for Catalinas, which, with an effective range of 600 miles, could have made a thorough search. The appearance of U-boats off Newfoundland quickly broke the bureaucratic logjam: on 24 May the Air Ministry informed the RCAF authorities in London that nine Catalinas on order for the RAF were being diverted to Eastern Air Command. The aircraft were being lent subject to replacement from the first deliveries of Catalinas from the RCAF's own orders.[35]

As the British agreed to release the flying boats, a great sea action was unfolding that further underscored Eastern Air Command's need for more effective aircraft. The German battleship *Bismarck* and heavy cruiser *Prinz Eugen* sortied from the Baltic on 18 May and, after destroying HMS *Hood* in the Denmark Strait between Iceland and Greenland on the 24th, succeeded in breaking contact with shadowing Royal Navy cruisers. The Admiralty presumed the Germans were headed for the convoy routes, and Eastern Air Command went on general alert. No 10 Squadron stood in readiness as an air-striking force, and on 26 and 27 May the Digbys patrolled to extreme range, but *Bismarck* had in fact made for France.[36] She met her end at the hands of the Royal Navy southeast of Ireland. On the 28th Eastern Air Command's aircraft searched for *Prinz Eugen*, which had continued to cruise in the western Atlantic, but well beyond range of the available land-based aircraft. The RAF eventually found her, safely back in harbour at the French port of Brest. Nonetheless, German surface ships never again attempted to hunt in the north Atlantic.

It was the spreading U-boat menace rather than the surface raider threat that brought Air Chief Marshal Sir Philip Joubert de la Ferté, the new air officer commanding-in-chief Coastal Command, to urge the need for air protection of shipping across the whole expanse of the north Atlantic in June and July. As will be seen in Chapter 12, an RCAF delegation attended meetings at Coastal Command to co-ordinate operations from the two sides of the ocean. Air Commodore Anderson, who was still on duty in England, played a prominent part, making the case for supplying Eastern Air Command with the best equipment and more adequate flow of aircrew. The hope, which detailed study soon proved to be illusory, was that by pushing Catalinas to the limit, transatlantic patrols could be made between Newfoundland and Iceland. The real answer, as both Anderson and Joubert de la Ferté recognized, was for the Canadians to operate four-engine Consolidated Liberators from Gander, an ambition which in the event took two years to realize (see Chapter 15).[37]

The nine loaned Catalinas were promptly delivered to the main body of 5 (BR) Squadron at Dartmouth in June. Having already sent personnel to Bermuda for training on the type, by the end of the month 5 (BR) was well advanced in converting to the new machines. The squadron was considerably shaken, therefore, by orders to transfer its most experienced personnel and all the Catalinas to 116 (BR), a new squadron organizing at Dartmouth. By the end of July the latter unit had dispatched a detachment of four aircraft to the seaplane station at Botwood, Nfld, which carried out the important task of escorting convoys routed through the Strait of Belle Isle. In the meantime, 5 Squadron reactivated the Stranraers.[38]

The RCAF's expanding commitment in Newfoundland brought the organization of 1 Group headquarters at St John's on 10 July 1941. Group Captain C.M. McEwen assumed command on 15 August. His responsibilities were to include control of all RCAF units in Newfoundland and, more particularly, of air operations in support of the RCN's Newfoundland Escort Force, formed at the end of May to complete the system for continuous naval escort of transatlantic convoys. For the time being, however, Eastern Air Command retained tactical control of the Newfoundland squadrons, passing orders through 1 Group. In the first months of its existence, the new headquarters was fully occupied with the development of command communications and in overseeing the construction of a new aerodrome at Torbay, near St John's.[39]

Allied command relationships also changed in the summer of 1941. Following Anglo-American staff talks, the US Navy assumed responsibility in July for the defence of American and Icelandic merchantmen moving between North America and Iceland. A few weeks later in the 'Riviera' meeting between Churchill and Roosevelt at Argentia, Nfld, the two leaders agreed to adopt the US Navy's Hemisphere Defence Plan No 4, more commonly known as WPL-51, placing Canadian naval forces in the area under American direction. This did not sit well with the Canadian navy, which thought its men more experienced, but a degree of RCN autonomy was ensured by the creation of all-Canadian escort groups.[40]

The situation facing the air force was more ambiguous. WPL-51 had applied only to the RCN, but since the American doctrine of unity of command assumed

naval control and direction of maritime air operations far from shore, the US Navy was inclined to exercise command over the RCAF for these purposes as well. This had never been Canadian practice, but on 21 September Eastern Air Command learned that the senior American officer in Newfoundland, Rear Admiral A.L. Bristol, had received instructions that the RCAF was not to escort any more convoys out to sea. Naval Service Headquarters interpreted this to mean that RCAF escort duties were confined to Canadian and Newfoundland coastal waters, and that all long-range work would be left to the US Navy and US Army Air Forces.[41] Anderson was indignant: 'Since September 1939 this command has been providing anti-submarine patrols and sweeps in [the] protection [of] ocean convoys often 600 to 800 miles to sea. Many of our personnel have lost their lives in devotion to this the most honourable duty they could perform while serving in Canada. If any BR squadrons retained in this command [are] capable of undertaking general reconnaissance and convoy patrols and anti-submarine sweeps far to sea, [it is] strongly recommended [that] as air defence, protection Atlantic coast, and as means [of] maintaining high spirit [sic] de corps within the command, these squadrons be permitted to take part [in] such operations and not restricted coastal zones.'[42]

This was hyperbole, but national interests were at stake. Eastern Air Command's chief of staff, Group Captain F.V. Heakes, made a personal visit in early October to Admiral Bristol. On 17 October Anderson went to Argentia to meet with Bristol, in company with Group Captain McEwen and Commodore L.W. Murray, commanding the navy's Newfoundland Escort Force. Joint Canadian and American arrangements for operational responsibilities took shape as a result of this meeting. They were as flexible as conditions allowed. Generally speaking, US Navy aircraft were to escort all convoys east of 55° west and south of 48° north; Canadian aircraft would cover shipping in the Canadian Coastal Zone west of 55° west, and to extreme range off Newfoundland north of 48° north. The RCAF thus ensured that its squadrons would not be superseded by Newfoundland-based US forces in long-range ocean tasks. Anderson had also succeeded in defining a Canadian zone under Eastern Air Command control and thereby made it more difficult for the Americans to extend their influence over the RCAF. He also persuaded his US colleagues that communications between Argentia and St John's were too slow and clumsy for Admiral Bristol's headquarters to exercise operational control over 1 Group.[43]

These agreements did not fully resolve the problem of air force command and control. A revision of WPL-51, WPL-52, appeared to apply the principle of unity of command by the US Navy to all the forces involved in defending the east coast of North America. To have unity of command, which was unacceptable within the Canadian armed forces, imposed by a foreign service, contrary to the provisions of ABC-22, struck a raw nerve at Air Force Headquarters. In an attempt to mollify the chief of the air staff, on 20 October Admiral H.R. Stark, US chief of naval operations, wrote to explain that WPL-52 allowed the commander-in-chief of the US Fleet to exercise strategic direction over Canadian naval and air forces only outside the Canadian coastal zone. As the RCN had already agreed to this provision, Stark invited Breadner to do the same 'subject

to the limitations contained in ABC-22.'[44] This was awkward. The reference to ABC-22 seemed, on the surface, to satisfy all the demands made by the Canadian government to protect Canadian interests. How could the RCAF refuse, particularly when the RCN was satisfied? The Cabinet War Committee concluded that the air force should follow suit unless it could demonstrate valid operational objections.[45]

Air Vice-Marshal G.O. Johnson, who as deputy chief of the air staff was responsible at this time for the Home War Establishment, offered a sufficiently convincing argument. He pointed out that the RCAF had agreed to unified command under the terms of ABC-22 only in cases of extreme urgency. 'We operate here successfully *in co-operation* with the RN and RCN, just as Coastal Command does. As far as we know there has never been an occasion where it has been deemed necessary to change this relationship.' He went on to suggest that being placed under American command would lower the morale of flying personnel, while the Canadian public would find it anomalous 'that our active forces are operating under the command of forces of a foreign power which, technically speaking, is not yet a belligerent.' In responding to Admiral Stark, Breadner assured him that 'all possible RCAF strength' would be committed to convoy protection, but, noting the successful co-operation between Eastern Air Command and the Commonwealth navies, rejected unified command. Stark accepted the rebuff, while making it clear that the responsibility for the divided command in the northwest Atlantic lay with the RCAF.[46]

Although the air staff's position had weight from a nationalistic perspective, Breadner, Johnson, and other senior RCAF officers had misinterpreted the precedents set by Coastal Command and would continue to do so. Difficult as it was for Canadian airmen to accept, Coastal Command did come under the operational control of the Admiralty, and its air groups responded directly to the commanders-in-chief of the Royal Navy's home commands (see Chapter 12).[47] If anything, the British example suggested that the RCAF's coastal formations could function well under naval direction. Although Naval Service Headquarters in Ottawa was not an operational headquarters like the Admiralty, neither did Eastern Air Command fall under the control of the east coast naval command. There was some justification for the independence of the RCAF on the Atlantic coast, however, for, unlike Coastal Command, its responsibilities were wider than maritime warfare, including fighter defence and co-operation with the army.

The air staff was on firmer ground when it opposed a fresh American attempt to impose unified command in Newfoundland during December 1941, following the United States' entry into the war. No 1 Group could not be divorced from Eastern Air Command because of Newfoundland's intimate geographical connection, especially from the air point of view, with the defence of the Canadian Atlantic coast. The whole of the command's resources had to be immediately available to reinforce stations in any part of the region where the enemy struck. Group Captain Heakes also astutely predicted that the American presence in Newfoundland might soon be greatly reduced if ships and aircraft were withdrawn to the Pacific, and he further pointed out that with the

introduction in the near future of aircraft able to make transatlantic patrols, it would become increasingly important for the RCAF to work with Coastal Command rather than the US Navy. With these arguments, and others from the army and the navy, the Chiefs of Staff Committee ruled out a unified command. On 20 January 1942, however, Eastern Air Command turned tactical control of the RCAF squadrons in Newfoundland over to No 1 Group, whose organization was nearing completion; henceforth command headquarters gave only general directives to the headquarters in St John's.[48] As will be seen in Part IV of this volume, serious tensions would continue to inhibit co-operation between the Canadian and American air forces in Newfoundland for some months to come, but the way had been cleared for No 1 Group to develop an effective relationship with its American counterparts.

Although, as so often in coalition warfare, large and powerful allies sometimes seemed to pose the greatest threat, the real enemy was pressing closer to Canadian shores – U-boats made a second foray off Newfoundland in October-November 1941 – and Eastern Air Command's most urgent concern was to become more battle-ready. Hudsons, Bolingbrokes, and Digbys were adequate patrol bombers, but lacked range. Additional Catalinas (PBYs) were the obvious requirement. Delivery of thirty-six PBY5 flying boats from a Canadian order in the United States had begun in late August; fourteen PBY5As, the new amphibious model that would be more useful in the north west Atlantic, were due to arrive at the end of the year and in early 1942. These fifty aircraft incorporated modifications laid down by the Canadian air staff and were the first of the type to be designated Canso – Canso 'A' for the amphibious version – in the RCAF (the nine Catalinas on loan from the RAF had been built to somewhat different British specifications and therefore continued to carry that name). No 116 (BR) Squadron began ferrying Cansos from Rockcliffe to the Atlantic coast in September, while 5 Squadron flew its Stranraers to Western Air Command and converted to the new type.

However great the RCAF's need, the government responded generously to a British appeal for aircraft from the Canadian order in September. Over the next two months twenty-nine of the thirty-six Cansos were lent to the RAF. The Canadian air staff was also willing to send 5 and 116 Squadrons overseas to operate the aircraft, an offer the Air Ministry declined because the machines were needed to replace wastage in existing RAF units. The two governments did agree that when the fourteen Canso 'A' amphibians were delivered to the RCAF in early 1942 the remaining seven Canso flying boats would be transferred to the RAF, and the borrowed Catalinas returned. The outbreak of the Pacific war ultimately forced Canada to cancel this arrangement; nevertheless, the RCAF had already surrendered enough flying boats to equip two squadrons.[49]

While 5 Squadron re-equipped with Cansos during the fall of 1941, 118 (F) Squadron ferried Curtiss Kittyhawks to Dartmouth. By December the unit had replaced its Goblin biplanes with fourteen of the new fighters, at last giving the east coast effective air defence equipment. The aircraft situation was improving, but shortages continued to plague the command. The supply of well-trained aircrew was another continuing problem. Although the east coast did have

priority over the west, large numbers of personnel were being sent overseas. On balance, the greatest progress was in the development of ground facilities. Eastern Air Command now had six operational aerodromes: Dartmouth, by far the biggest, Sydney, Yarmouth, Gander, Torbay, and Saint John. A new land base at Goose Bay, Labrador, was in the early stages of construction. Seaplane stations had been completed or were under construction at Botwood, Gaspé, North Sydney, Dartmouth, and Shelburne.[50]

Eastern Air Command had, to a large extent, been built up at the expense of its western counterpart, but that was no longer possible after the Japanese attack on Pearl Harbor. Simultaneously, the command faced a much greater threat. Germany, standing loyally by the Axis alliance, declared war on the United States in the immediate aftermath of Pearl Harbor. Previously Hitler had forbidden submarine operations in North American waters south of Newfoundland for fear of embroilment with the United States, but now the heavy shipping traffic off the Canadian and American coasts was fair game. In January 1942, U-boats opened an offensive in the northwest Atlantic, the subject of Part IV of the present volume, whose last actions would not be fought until after the German capitulation in May 1945.

The possibility that Germany might also make air raids on North America raised the issue of defences for central Canada, where the RCAF had no operational command. There were numerous potential targets of critical importance to the country's war effort in the canal locks and steel mill at Sault Ste Marie, mines in northern Ontario, and industrial areas further south. Before the war, members of parliament had worried about the danger of air attacks from Hudson and James bays, while Canadian and, more particularly, American military plans had taken account of raids against inland centres by aircraft operating from ships or temporary bases on isolated coastlines. But the threat was exceedingly remote, and the resources available to the RCAF desperately scarce. The August 1940 revision of the defence of Canada plan had directed No 1 Training Command to make emergency defence plans for the region, but an air staff initiative of late 1940 to have the command organize the Aircraft Detection Corps around Hudson Bay (which still came under Eastern Air Command's control) was not pursued energetically. After Pearl Harbor it was impossible to give the central region such a low priority. Municipal leaders and industrial officials in the vicinity of the Sault and Sudbury demanded air defences, but more importantly, American authorities pressed for action. At a meeting of the PJBD on 25-6 February 1942, the US members announced that an army anti-aircraft regiment, less a battalion, would be deployed south of the border at Sault Ste Marie and, at their insistence, the board urged the RCAF to make a 'comprehensive' study of the threat to the area.[51]

The air staff was reluctant to provide local defences, noting that equally vital industries and canal bottlenecks existed elsewhere in central Canada. Attacks 'by small numbers of aircraft' were possible but unlikely. To reach the targets, the enemy would either have to cross Eastern Air Command's coastal defences or launch aircraft from temporary bases or ships in Hudson or James bays. This latter possibility was 'most improbable and quite impossible except for

approximately three months of the year, namely mid-July to mid-October.' Under the circumstances, it seemed reasonable to deploy anti-aircraft guns at Sault Ste Marie, but not to use scarce air defence equipment to surround the many individual targets far inland. Better, the air staff advised, to strengthen and deepen coastal radar warning coverage and interception defences by installing radar along the Labrador coast and providing fighter aircraft for Goose Bay, Gander, and Torbay.[52] This extra fighter strength, stretching westwards to include a station at Bagotville which covered the vital aluminum industry at Arvida, Que., was soon approved by the Canadian government as part of the forty-nine squadron plan put forward by Air Marshal L.S. Breadner on 16 March 1942.[53]

The United States continued to be concerned with the vulnerability of the Sault Ste Marie locks. In March the US government designated the air space around the locks on the American side as a restricted zone and asked Canada to institute similar measures on her side. Canada did so. At a PJBD meeting on 7 April, Lieutenant-General Embick, the US Army representative, won agreement that Canada should immediately organize the Aircraft Detection Corps around Hudson and James bays. Arrangements were made that month to feed information from the few Aircraft Detection Corps posts then operating in the area to the US Army headquarters co-ordinating the Sault Ste Marie defences. The RCAF organized a conference held on 6-7 May at Sault Ste Marie, Ont., where representatives of the Canadian and American services, commercial communications companies, the Ontario and Manitoba governments, and other agencies from both sides of the international border laid plans greatly to increase the number of ADC posts, establish filter centres to correlate observer reports at Winnipeg, Sault Ste Marie (at Fort Brady, Michigan), and Ottawa, and maintain twenty-four-hour listening watches on observer radio links. To administer the expanded Canadian system, a separate Central Area Aircraft Detection corps was finally organized on 15 June, under the control of the air member for air staff at Air Force Headquarters.[54]

The United States hoped that Canada would also conduct reconnaissance flights over Hudson and James bays and their approaches during the danger period after 25 July 1942, but Eastern Air Command could not spare aircraft from its vital anti-submarine duties, and there were no other Canadian resources available. For its part, the US Army established and manned radar units at Cochrane, Hearst, Nakina, Armstrong, and Kapuskasing, Ont., with a headquarters and filter room at the latter, in addition to supplying ground forces to defend the Sault. Canadian flying restrictions, originally limited to the immediate vicinity of the locks, were extended in early 1943 to a radius of 100 miles to correspond with the larger zone in effect in the United States, thereby giving timely warning of the approach of unidentified aircraft. The Sault defences were maintained throughout that year. Canada never regarded the threat as seriously as did the United States, but willingly co-operated with US plans. At the end of 1943 the United States decided to abolish its Central Defense Command and remove its troops from Sault Ste Marie. Air Force Headquarters disbanded the Central Area Aircraft Detection Corps, which had grown to

include 9077 observers, at the same time. Between February and April 1944 the restricted flying areas over the Sault on both sides of the border were abolished.[55]

However reluctant to commit resources at inland centres, the RCAF gave a leading priority to defences against enemy aircraft on the east coast. The forty-nine squadron plan of March 1942 called for no fewer than eight fighter squadrons in Eastern Air Command, each augmented by a night-fighter flight, as compared to the one unit, 118 (F), actually in existence. By the time the latter squadron moved to Alaska in June 1942, six others had organized or were about to do so. Procurement problems prevented the formation of the remaining two squadrons and the night-fighter flights, but during the latter part of 1943, all but one of the formed units had on strength or approached a full establishment of fifteen Hawker Hurricane XIIs, including immediate reserves.[56] This was nine fewer machines in each squadron than the over generous scale in the March 1942 plan, but aircraft for wastage replacement were available in Canada. The air staff, as has been seen, had always wanted a longer-range fighter than the Hurricane and was still attempting, without success, to procure more suitable types like the North American Mustang.[57]

The ground organization necessary to conduct fighter operations was also created in 1942 and 1943. The most ambitious part of the project was the development of a chain of radio (radar) stations or detachments to give early warning of enemy aircraft and control night-fighters. Radio detachments, renamed radio units on 1 September 1944, were of three types: early warning high flying (TRU) and early warning low flying (CHL), each with an approximate range of 100 miles; and ground control intercept (GCI), with a range of fifty miles. Filter centres at command and 1 Group headquarters plotted information from the radio units, Aircraft Detection Corps, and other sources, and fed the intelligence to sector control rooms at the fighter aerodromes which, in the event of an attack, would have directed the aircraft onto target.[58]

The increased threat to North America after Pearl Harbor also brought revisions in command arrangements. Concerned primarily to assure the public that everything possible was being done to improve the efficiency of the defences, in March 1942 the Cabinet War Committee overruled objections by the chiefs of staff and approved a system of unified command as between the Canadian services on the coasts. The senior members of the two Joint Service committees became commanders-in-chief, East and West Coast Defences, having authority to exercise overall strategic direction in their areas while retaining tactical command of their own particular service. Responsible to the commander-in-chief, East Coast Defences, the senior member of the Joint Service Sub-Committee in St John's was also now designated as 'commanding Newfoundland defences.' In practice, however, all that changed were the titles. The commanders-in-chief did not interfere in the operations of the other services.[59]

The real and pressing requirement, in fact, was for closer integration of the air and naval forces on the Atlantic coast to counter the U-boat offensive. It proved difficult to achieve. Not until the spring of 1943, when Great Britain and the United States agreed to the creation of the Canadian Northwest Atlantic theatre,

under the command of the RCN admiral at Halifax, was there a single controlling authority. More strikingly, although 1 Group and Flag Officer Newfoundland had begun to work together in a combined headquarters at St John's in October 1942, interservice wrangling continued to prevent the organization of a combined headquarters at Halifax until July 1943.[60]

Eastern Air Command approached its zenith in the fall of 1943. There were, in November, eighteen combat squadrons on the order of battle, including eleven bomber-reconnaissance (four in the strike role, and seven anti-submarine), six fighter, and one army co-operation training. The air staff's forty-nine squadron programme of March 1942 had allocated twenty-three combat squadrons to the east coast but, as already noted, the large fighter organization planned had been cut back substantially; two glider squadrons, intended to support the army in countering enemy landings, were never formed. In terms of the number of squadrons and aeroplanes immediately available for operations, the target set for the critical maritime-reconnaissance role – five strike and seven anti-submarine units – had nearly been realized. Ten bomber-reconnaissance squadrons had fifteen machines on strength, or were only a few short of that number, and the eleventh was in the process of converting from outdated Digbys to Cansos. However, the Hudsons of two strike squadrons had not been replaced by more modern Lockheed Venturas, and no squadron had access to the nine reserve and twelve wastage replacement aircraft envisioned for each unit in the air staff's calculations. Liberators had not featured in the March 1942 plan, but their delivery to 10 Squadron during the spring of 1943 had dramatically increased Eastern Air Command's capabilities.[61]

During 1943, the command's many stations and support units finally achieved a stable organizational life. Among the latter was the Eastern Air Command Marine Squadron, which was formed in June from the vessels and crews that had previously been attached to the various air stations. Based on a central administrative home at Dartmouth, the command's 'fleet' included nine high-speed rescue launches, four supply and salvage vessels, the largest being the 600-ton ship *Beaver*, and over seventy smaller craft. The squadron assisted the repair depots in recovering wrecked aircraft (the unit's establishment included a section of divers who had the unpleasant and dangerous jobs of retrieving bodies and unexploded weapons), transported stores to the command's many isolated stations and detachments, and carried out rescue missions. By early 1944 the last service had been put on a more effective basis through the integration of the rescue vessels on both coasts with the flying control organization that monitored the movements of all aircraft in operational areas.[62]

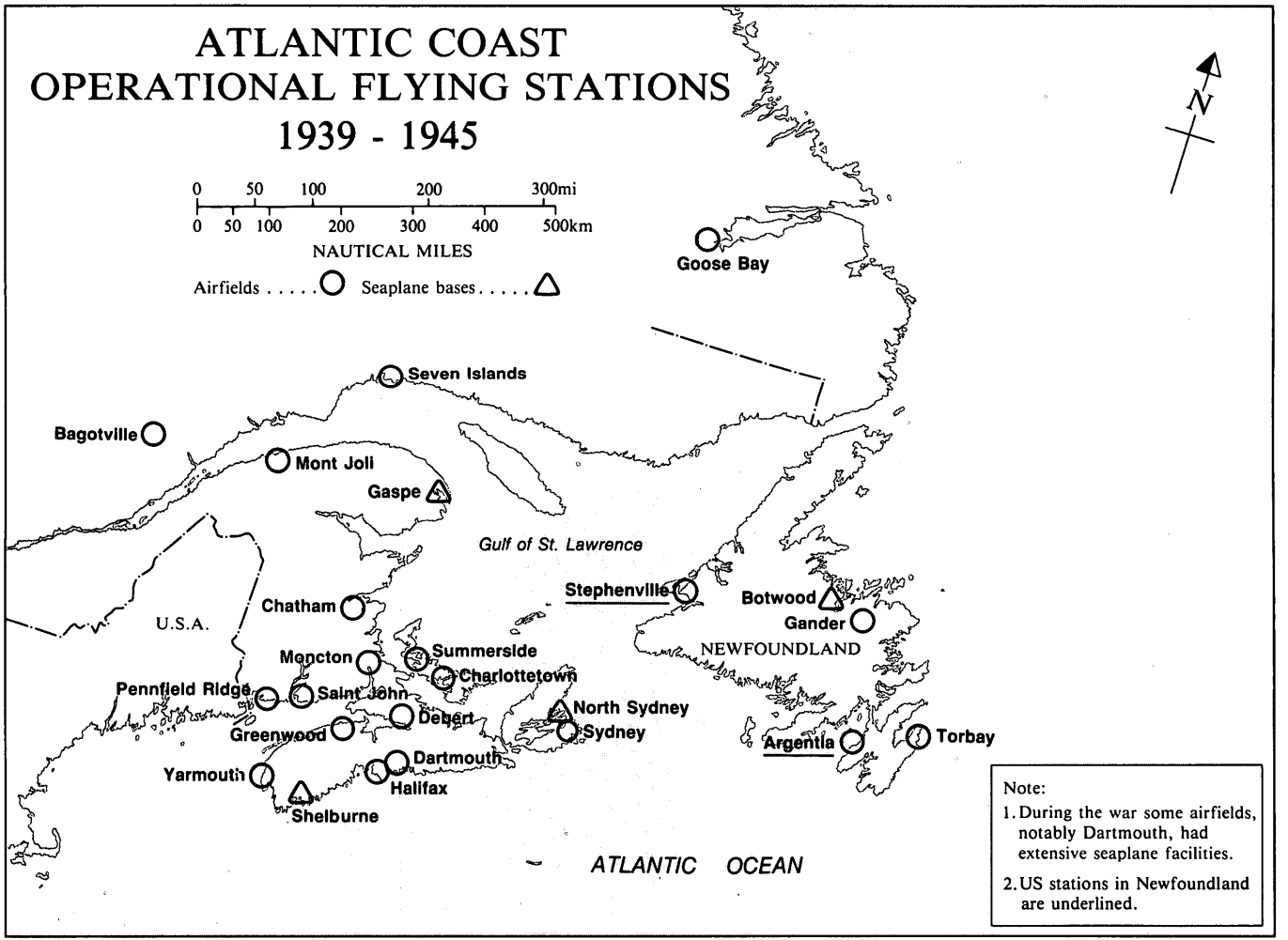
When at the end of January 1944 Eastern Air Command reached its peak strength of 21,234 officers and airmen, reductions had already started in response to Allied successes in every theatre of war. The first units to go had been the coast artillery detachments, made redundant by army radar equipment. At the end of 1943, only 1 (CAC) Detachment at Saint John, NB, remained. During 1943, as well, Air Force Headquarters began regularly to post

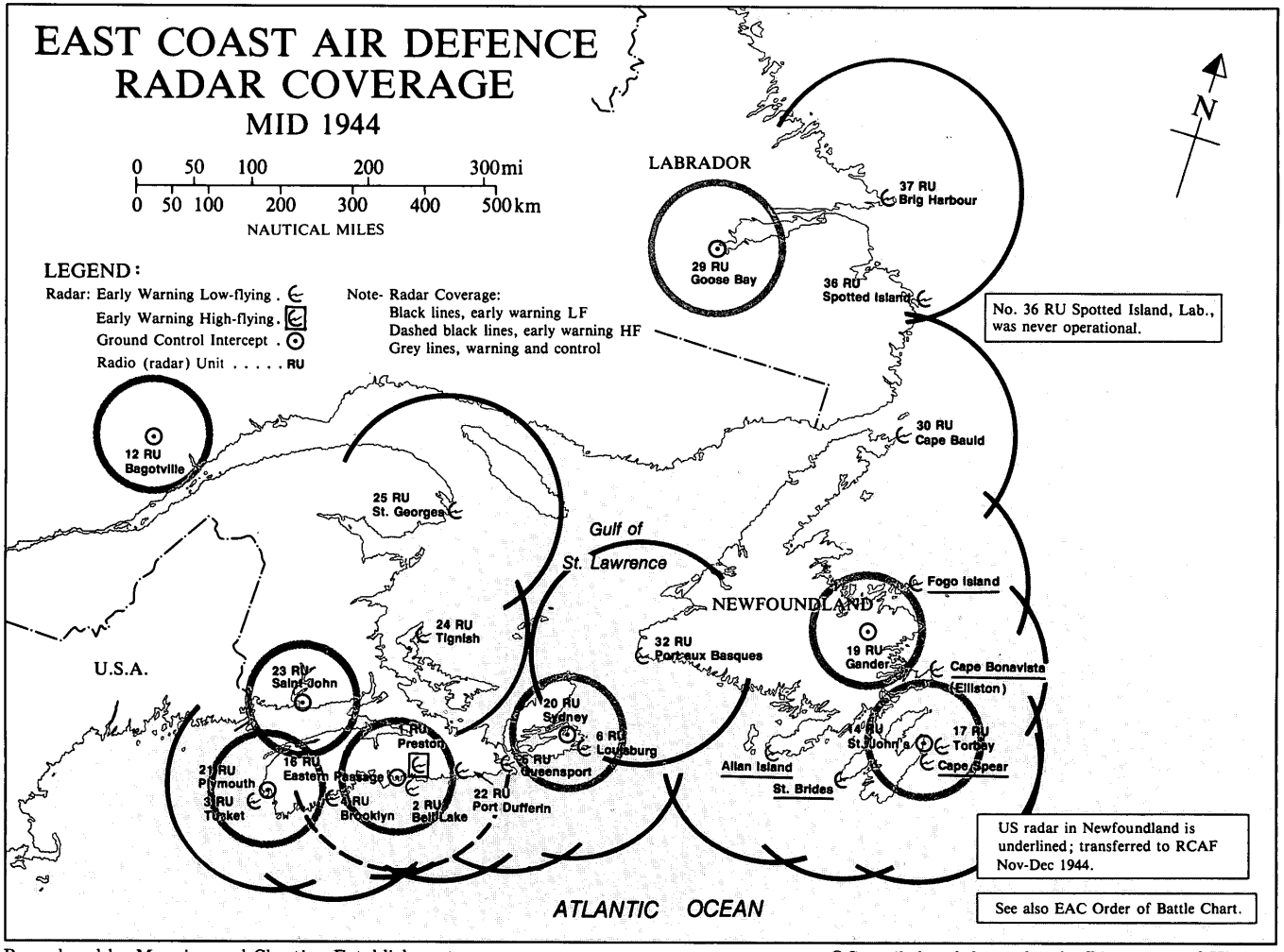
experienced pilots overseas from home fighter units. Of greater impact was the government's approval, in September 1943, of the air staff's proposal to reinforce the RCAF Overseas from the Home War Establishment by dispatching six fighter squadrons to No 83 Composite Group, Second Tactical Air Force, RAF, which at that time was earmarked as the air support formation for the First Canadian Army after the invasion of France in the spring of 1944. Three squadrons were withdrawn from Eastern Air Command, welcome news in units for which there had been little exitement in the way of enemy air attacks or landings, and whose only opportunity for action had been inshore anti-submarine patrols, a task for which the aircraft were ill-suited. No 123 (Army Co-operation Training) went overseas before Christmas 1943, reorganizing as 439 (Fighter-Bomber) Squadron; 125 (F) and 127 (F), which followed early in the New Year, became 441 (F) and 443 (F) Squadron, respectively.[63]

By this time, Air Marshal Robert Leckie, Air Marshal Breadner's successor as chief of the air staff, had made further cuts. One Canso squadron, 117 (BR), disbanded in December 1943, and another, 162 (BR), moved to Iceland in January 1944 to serve with Coastal Command. Air Force Headquarters also started to dispatch seasoned bomber-reconnaissance aircrew overseas (see Chapter 16). During March-April, 119 (BR) Squadron (Hudsons), 128 (F) Squadron, 130 (F) Squadron, and 1 (CAC) Detachment disbanded, and RCAF Stations Saint John, Botwood, Shelburne, and North Sydney were closed or placed under care and maintenance. To compensate for the loss in fighter strength, the establishments of the command's two remaining fighter units, Nos 126 and 129, were raised from fifteen to eighteen aircraft, and 1 OTU, Bagotville, was ordered to have twelve fighters available for operations at thirty minutes' notice.[64]

Other squadrons disappeared from the order of battle during the summer and early fall of 1944, but the long awaited delivery of additional Liberators strengthened Eastern Air Command's maritime-reconnaissance capability. A fighter squadron and both Ventura-equipped strike units were to have disbanded; the selection of the latter squadrons reflected the urgent need for aircrew with twin-engine qualifications to man two new transport squadrons forming for service in Southeast Asia. Nos 113 (BR) and 129 (F) broke up in August and September, but 145 (BR) was spared by the reluctance of the east coast commanders to give up entirely the fast and versatile Venturas, and by an upsurge in U-boat activity. In the meantime, 11 Squadron retired its Hudsons as the new Liberators arrived, and in the fall began operations as the command's second very long-range squadron.[65]

Development of ground radar facilities and associated airborne equipment continued until the end of the war. By 1945 there were twenty-two radar stations on the east coast for early warning or ground control, including five in Newfoundland that had been taken over from the US forces in late 1944. Although the units had no opportunity to serve in their primary air defence role, they were immensely valuable in locating friendly aircraft that were lost or in distress. The range at which flights could be tracked, moreover, had been greatly extended by Identification Friend or Foe (IFF) equipment, first fitted in





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Eastern Air Command aircraft during 1943. These airborne sets responded to signals from complimentary equipment at radar stations, and could also transmit a specially coded signal if the aircraft were in distress.[66]

Further aids to navigation were provided by three other ground radar systems, two of which worked in conjunction with air-to-surface vessel (ASV) radar that had become a standard fitting in the command's aircraft since 1942. The first was a beacon that responded to radiation from an ASV set with a strong pulse, enabling the aircraft to home on a known position. Twenty-five beacons were installed on the east coast by January 1945, each duplicated so that there would be no interruption in the event of equipment failure. The RAF's Blind Approach Beacon System, which was installed at eight Eastern Air Command airfields starting with Gander in 1942, functioned in much the same way. Pulses from a ground transmitter registered on airborne ASV sets, permitting pilots to align their aircraft with the runway in conditions of poor visibility. Finally, the US Navy had built LORAN stations, the American long-range navigation system for obtaining position by pulse signals, in Iceland, Newfoundland, and on the Canadian east coast. By late 1944 the necessary airborne equipment had been installed in Eastern Air Command's Liberators, but fitting in other types was still proceeding at the end of the war.[67]

In an entirely different category were the RCAF's anti-submarine radar stations in the Gulf of St Lawrence. As a result of the U-boat campaign in the Gulf during 1942, early in 1943 the air force ordered eight microwave early warning (MEW) sets, modified to detect surfaced submarines. Only one station, No 77 Radio Unit at Cape Ray, Nfld, was ready for operations during the 1944 shipping season; two others, No 75 at Fox River, Que., and No 76 on St Paul's Island, NS, were completed by 1945. The remaining sets were never installed because the navy did not develop facilities to plot the thousands of contacts made by the stations, and U-boats virtually abandoned surfaced operations in coastal waters.[68]

The radar networks largely superseded the Aircraft Detection Corps. In November 1944 the chief of the air staff ordered the organization, which had reached a peak enrolment of 30,000 members in December 1943 and still had 23,000 observers on strength, to be disbanded. Radar could not entirely replace the ground observer, however, and shortly afterwards former coastal observers and lighthouse keepers in the eastern area were asked to pass information on aircraft in distress, or on any other untoward incident, to the nearest RCAF station. They continued to do so for the rest of the war.[69]

On 4 May 1945 Admiral Doenitz ordered the U-boats to break off action. The official German surrender came two days later. In Eastern Air Command there was celebration for some and business as usual for others. A small handful, from RCAF Station Dartmouth and No 8 Construction and Maintenance Unit, became directly involved in the Halifax VE-Day Riots, though all charges against them were subsequently dropped. For many it was difficult to believe that victory had really been achieved, but within seven weeks much of Eastern Air Command's fighting strength had been dispersed.[70] By the end of June 1 Group headquarters at St John's had closed down, six squadrons had disbanded, and a seventh, 11

(BR), had moved to the west coast, which was still on a war footing. Two anti-submarine squadrons remained – 10 (BR) at Torbay and 162 (BR), recently returned from Iceland, at Sydney – in case 'rogue' U-boats refused to surrender. Both units were disbanded during the first half of August.

11
The Pacific Coast

Although the possibility of war with Japan was allowed for after September 1939, it was assumed that a strong and effective American fleet would stand between the Japanese and whatever Canadian forces were available in British Columbia. The unexpected damage done to the US Navy at Pearl Harbor altered Canadian perceptions of the threat to the Pacific coast. For a time it seemed that the Japanese might actually be capable of mounting a large-scale attack on North America, and because of this threat rather larger forces were stationed in British Columbia until 1945 than had been anticipated in pre-December 1941 plans.

West Coast defence during the Second World War, however, was never merely a simple military problem. British Columbia demanded an extra measure of protection, in part because of local hostility to the Japanese (including the Nisei in Canada) and in part because of the province's sense of isolation on the far side of the Rocky Mountains. These feelings of insecurity were not assuaged, even after the Japanese began to suffer defeat in the Pacific, and the government in Ottawa was compelled to offer greater insurance to the region than the military situation dictated. Few, therefore, of the thousands of Canadians who stood on guard on the west coast until August 1945 were expected to meet the enemy, and few did. Their presence was due very largely to political considerations, yet it was no less legitimate for that.

Army, navy, and air force planners actually began to look seriously at the problem of west coast defence in the late 1920s, when it seemed that Canada might be called upon to use force to assert its neutrality in an American-Japanese war. By the late 1930s, at the specific urging of the government, the army made an effort to improve its coastal defences in the region, the navy prepared to conduct off-shore patrols with the few ships at its disposal, and the air force selected sites for airfields and seaplane bases to facilitate reconnaissance along the entire coast and to provide a limited strike and air defence capability in the Victoria-Vancouver area. The air force was the 'predominant partner' in Pacific defence for reasons of geography. Aeroplanes could respond quickly and at great range to any incursion into Canadian territory or territorial waters. Thus, even before the RCAF obtained its independence from the army, a separate Western Air Command under Group Captain G.O. Johnson had been established on 1 March 1938 answering directly to Air Commodore G.M. Croil, the senior air officer in

Ottawa. Johnson's command included all RCAF units in British Columbia, Alberta, Saskatchewan, and Manitoba.[1] He was responsible for 'all phases of air action in the defence of the Western Canadian coast line and waters ... and for the air defence of vulnerable points within the confines of his operational zone.'[2] After the Munich Crisis of September 1938, the focus of Canadian defence preparations swung towards the Atlantic, however, and several units originally allocated to the west coast, and still physically located in western Canada, were removed from the command's war establishment.[3] This transfer left two permanent and three auxiliary squadrons for employment when war broke out in September 1939.

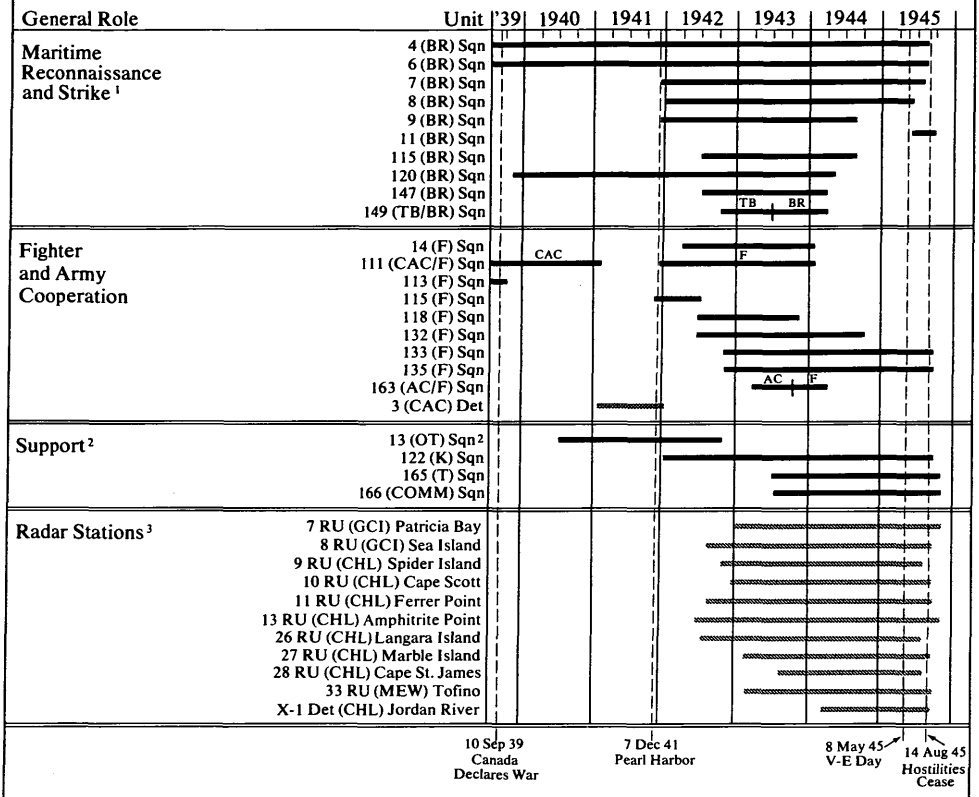
The Joint Service Committee Pacific Coast had divided the region, with its more than 1000 miles of coastline, into five defended areas. To cover them, the available squadrons had a total of eight serviceable operational aircraft, all obsolescent. No 4 (General Reconnaissance) Squadron flew one Supermarine Stranraer and two Vickers Vancouvers; No 6 (Torpedo Bomber) operated five Blackburn Sharks. The auxiliary squadrons – Nos 111 (Coast Artillery Co-operation), 113 (Fighter), and 120 (Bomber), the latter not immediately available for use – had no effective machines. There was not even the prospect of manning and equipping 113 Squadron, and it was disbanded in October.[4] The command did not receive any further allocation of fighter support until late 1941.

The one positive note in this gloomy recital was that the two permanent squadrons were already at their initial wartime station of Vancouver. On 2 September, the day after the precautionary defensive order against Germany came from Air Force Headquarters, two Blackburn Sharks of 6 (TB) Squadron flew the first ship identification patrols. Ten days later, 4 (GR) Squadron sent its first two aircraft out on coastal patrols,[5] while No 6 stopped its routine flights. 'As from today no search patrols will be carried out,' 6 Squadron's diarist noted, '... unless some definite job is to be done. Aircraft to stand by as striking force.'[6]

Pressed by the army for effective air spotting assistance to the coast artillery, Johnson in desperation suggested taking over 'Ginger Coote Airways,' a local commercial operator of several radio-equipped floatplanes. Croil rejected this idea and directed that 111 Squadron carry out its assigned role as best it could from the partially constructed runways at Patricia Bay. An Armstrong Whitworth Atlas with neither guns nor radio was all that could be spared to reinforce No 111's single Avro 626 trainer. The permanent squadrons found their tasks as the strike and reconnaissance force equally bizarre.[7] 'Stranraer "912 is the only aircraft in the Command which is suitable for search and patrol duty,' wrote Johnson, now an air commodore, on 10 September. 'The two serviceable Vancouver[s], due to their unreliability and poor performance, are unsuitable for operations except under fairly favourable conditions and should be kept within easy reach of adequate repair facilities. To operate them in remote areas, such as the Queen Charlotte Islands, is to invite disaster. The Shark II aircraft are continually becoming unserviceable ... The Shark III aircraft have not been in service sufficiently long nor in sufficient numbers to determine whether or not they are more reliable than the Shark II.'[8]

It was fortunate there was no enemy on the coast and Western Air Command

WESTERN AIR COMMAND
ORDER OF BATTLE



NOTES:

1. Nos. 119 (BR) and 160 (BR) Sqns organized and trained at Sea Island for brief periods in 1940 and 1943 respectively before joining EAC. No. 117 (BR) Sqn transferred from EAC to WAC in late 1941, but was disbanded to provide reinforcements to other squadrons.

2. In addition to 13 (OT) Sqn, the following Operational Training Units were in WAC:

32 OTU (RAF)	Patricia Bay/Comox	Torpedo-Bomber/Transport	1 Sep 41 - 31 May 44	Became 6 OTU
3 OTU	Patricia Bay	Flying-Boat	1 Nov 42 - 3 Aug 45	Absorbed 13 (OT) Sqn
5 OTU	Boundary Bay/Abbotsford	Heavy Bomber	1 Apr 44 - 31 Oct 45	
6 OTU	Comox	Transport	1 Jun 44 - 15 Jan 46	Ex - 32 OTU

3. Radio Detachments, renamed Radio Units 1 Sep 44:
   CHL Chain Home Low-flying. Early warning radar.
   MEW Microwave Early Warning / Ground Control Intercept
   GCI Ground Control Intercept

AC	Army Cooperation	COMM	Communications	OT	Operational Training
BR	Bomber-Reconnaissance	F	Fighter	TB	Torpedo Bomber
CAC	Coast Artillery Cooperation	K	Composite	T	Transport

had time to continue the interrupted prewar construction and rearmament process. Work began on a planned seaplane base at Prince Rupert in December, and on facilities at Coal Harbour and Bella Bella in 1940 (see map, front endplate). Although the stations were still far from complete, in May 1940 No 111 (CAC) concentrated at Patricia Bay, previously the site of only its advanced detachment, while 4 and 6 (Bomber-Reconnaissance) Squadrons moved fully to their war bases at Ucluelet and Alliford Bay, hitherto manned only on a skeleton basis. No 13 (Operational Training) Squadron occupied Sea Island, the site of the prewar Vancouver civic airport, while 120 (BR) Squadron followed No 111 from that site to Patricia Bay.[9]

After a year of war, the command's operational reconnaissance strength had grown to two Stranraers, fourteen Sharks, and four Northrop Deltas. Qualified aircrew were in short supply, and in September 1940, when Air Force Headquarters ordered the three west coast bomber-reconnaissance squadrons reduced to a cadre basis in order to bring similar east coast squadrons up to full strength, the shortage became chronic. No 111 Squadron, redesignated but not converted to a fighter role, had to be disbanded instead on 31 January 1941 and replaced by the smaller No 3 (CAC) Detachment.[10]

There was some encouraging progress, however. The RCAF Marine Squadron, vital for the support of isolated coastal stations, built up a collection of small search-and-rescue, supply, and working craft, and gave increasingly effective support to the command throughout the war. Starting in May 1940 the Aircraft Detection Corps began to enrol its unpaid volunteer civilian observers along the coast and throughout the countryside.[11] In January 1941 American requests for improved coastal air defences, and Mackenzie King's crucial opinion that 'such expenditures would be insurance ... [against] attack from the East,' persuaded the minister of finance, J.L. Ilsley – who even after a year of war expressed shock at the great expenditure on defence projects – to withdraw his objections to new facilities at Ucluelet.[12]

In the Joint Canadian-United States Basic Defence Plan – 1940 against 'direct attack by European and/or Asiatic Powers,' the Permanent Joint Board on Defence specified two joint tasks along the Pacific coast: one for the defence of Alaska, British Columbia, and the northwestern United States; and one for the protection of their vital sea communications. Mutual support was to be given if needed, although except for the possible early backup of Alaskan garrisons by Canadian forces from British Columbia, the board's report on the plan implied that it would usually be a case of American assistance to Canada. PJBD recommendations of mid-November included the completion of the North West Staging Route from Alberta to Alaska and the construction of a landplane aerodrome near the Ucluelet seaplane station, to extend fighter and bomber support northward towards the Queen Charlotte Islands.[13]

In the meantime, the command's air officer commanding from October 1939, Air Commodore A.E. Godfrey, and the Joint Service Committee Pacific Coast kept an anxious eye on the growing threat from Japan. The air staff in Ottawa was not in tune with their fears, but did recognize many of Western Air Command's shortcomings and difficulties. In the fall of 1941 a reconstituted

115 (F) Squadron, equipped with long-range, modified, twin-engined Bristol Bolingbrokes, moved out west to provide a measure of fighter support, though some imagination was required to see the Bolingbroke – designed as a light bomber – in an air defence role. If active hostilities occurred, a modern fighter squadron might be sent from the east for short-range work. Stranraers from the east coast and others expected for future delivery promised to give Western Air Command enough aircraft to fill under-strength squadrons at Ucluelet, Coal Harbour, Bella Bella (where a new 9 (BR) Squadron would be located), and Alliford Bay. Supporting them in early December would be Sharks flown by a new 7 (BR) Squadron at Prince Rupert and, if needed, the service aircraft of 13 (OT) Squadron at Patricia Bay. Emergency air reconnaissance and striking strength off the southern half of the west coast was also increased considerably by the fifty-six Bristol Beauforts of 32 Operational Training Unit, RAF, at Patricia Bay, to be available by mid-December. These forces would finally allow limited coastal and seaward coverage up to approximately 250 miles.[14]

On 29 November 1941 the chief of the air staff told Western Air Command to maintain the 'closest collaboration' with both of the other Canadian services and with American west coast forces. A few days later, on 5 December, Lieutenant General John L. DeWitt, commanding the American Western Defense Command, suggested a combined meeting to draw up a tentative area defence plan based on ABC-22, the successor to the 1940 Joint Defence Plan. On 7 December, before such a meeting could be held, Japanese aircraft bombed Pearl Harbor. Canada declared war on Japan that night, the United States and Great Britain followed suit on 8 December, and ABC-22 immediately came into force in the Pacific.[15]

As these great events unfolded all forces went to a high degree of readiness. Aircraft flew continuous patrols by day. Reinforcements rushed west to fill personnel shortages. No 111 (F) Squadron (Curtiss P-40 Kittyhawks), reformed the previous month at Rockcliffe, Ont., transferred to Sea Island for fighter defence. No 8 (BR) Squadron (Bolingbrokes) joined No 111 at the beginning of 1942 after a flight from Sydney, NS – the first time a complete squadron had flown from coast to coast – in unheated aircraft in the dead of winter. Bases at Prince Rupert, Bella Bella, and Coal Harbour became operational, manned in part by two new squadrons, 7 and 9 (BR).[16]

Effecting this reinforcement demanded immense efforts from many quarters. The kind of difficulty encountered is nowhere better illustrated than in the offices of the Canadian Department of Munitions and Supply's purchasing agents in Washington. On 8 December the United States froze the export of all military equipment, just as eight new Curtiss Kittyhawks were about to depart for their Canadian destination from Buffalo. They could not be pried from the grip of American officials until, two days later on 10 December, someone managed to get through to the office of the commander of the United States Army Air Forces, Major General H.H. Arnold. Since these aircraft were for the defence of North America their release did not require too much persuasion at that level. Far more difficult was the release of spare parts and ammunition without which the aircraft were useless. Unfortunately, this decision required co-operation from the RAF

delegation in Washington. It took several days of personal telephoning and negotiating for Arnold's long-suffering aide to obtain the necessary release for matériel ready to be shipped.[17]

Another complicating factor was public anxiety on the west coast. In mid-December the Chiefs of Staff Committee advised the Cabinet War Committee that fears of an impending Japanese assault on British Columbia were unwarranted. Not only was a large-scale assault beyond Japanese resources, but the full involvement of the United States would help Canada's defensive situation. This was borne out by the American draft area defence plan which provided the basis for the Joint Canadian-United States Pacific Coastal Frontier Plan No 2, or ABC-Pacific-22, formally approved by all Allied west coast commanders on 23 January 1942. Based on the provisions of ABC-1 and ABC-22, the plan was designed to protect sea communications and territory from Alaska to the northwestern United States. Committed to mutual assistance, Canadians nevertheless visualized very little demand for their services outside their own borders. The Joint Service Committee Pacific Coast assessed the threat at the end of 1941 as consisting of possible hit-and-run attacks by carrier-borne aircraft, submarines, and minelaying ships; small-scale bombardment by one or two warships; and at the most strikes against important targets by air or sea-borne raiding parties.[18] There was no change in established RCAF roles.

Air Commodore L.F. Stevenson, who had been a prewar senior staff officer on the west coast under Johnson, returned from overseas as air officer commanding at this critical period. The state in which he found his command can be seen in a report by his old commander who, as deputy chief of the air staff, visited early in 1942. Despite the latest reinforcements, Air Vice-Marshal Johnson judged there were still serious shortcomings. Stranraers were restricted to patrolling no further than 150 miles from base because there was an insufficient number of these aircraft even to cover the inshore areas adequately. If enemy ships should close the coast during darkness for dawn attacks, the sixteen Bolingbrokes of 8 (BR) Squadron comprised the only really effective strike force; 7 (BR)'s Sharks were obsolete and vulnerable floatplanes, and the only other strike aircraft, being with training units, were unavailable for quick reaction. No 115 (F) Squadron's twin-engined Bolingbrokes were slow and unhandy fighter aircraft, so 111 (F)'s Kittyhawks had to bear most of the air defence burden in the Victoria-Vancouver area. There were not enough fighters to maintain continuous patrols, and air defence relied heavily on the Aircraft Detection Corps' scattered volunteers for early warning and tracking. Nothing better was available until radar was installed later in 1942. North of the Victoria-Vancouver area the situation was even worse. Airfields for strike and fighter aircraft would not be complete for many months. At Prince Rupert, the second most vital area, no suitable site for an airstrip had yet been found. Even at that, the Canadian coast was better defended than the United States, which Stevenson found 'not half as well equipped to repel attack on the Pacific Coast' as Canada. There were so few flying boats that the RCAF had to supplement the US Navy's distant sea patrols.[19]

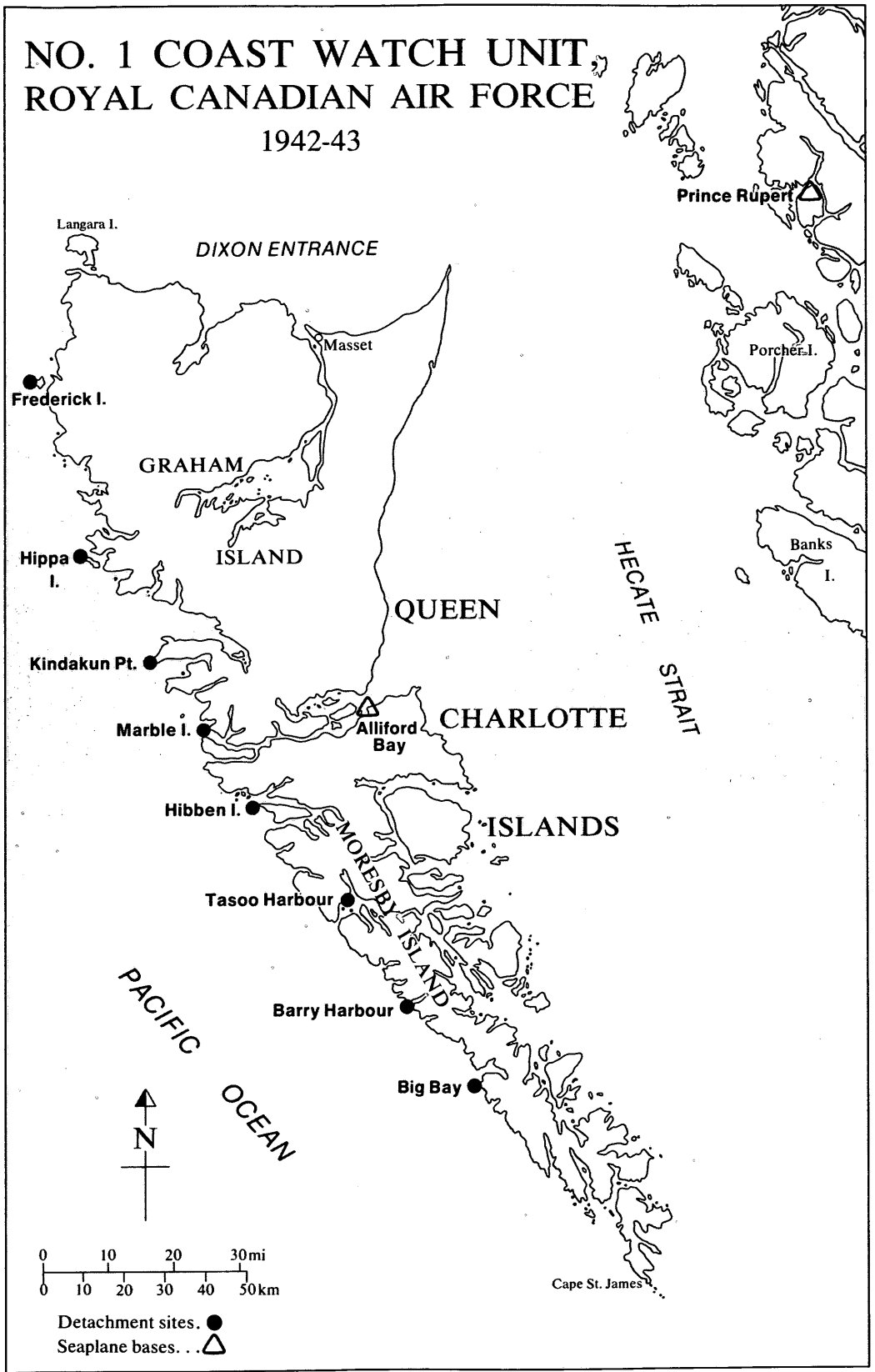
It is not surprising that Canada turned down renewed demands in the PJBD for

American control in the Pacific region. This would have required a reorganization of Western Air Command along the lines of the division of responsibility between the US Army Air Forces and the US Navy, which gave the navy tactical command and responsibility for over-water operations. The Canadian chiefs of staff successfully maintained that ABC-22, amplified by the Joint Board's twenty-second recommendation that local commanders co-ordinate their own efforts, was adequate. After more than a month's negotiations the American members let the matter drop.[20]

Liaison officers, as well as the telephone and teleprinter lines available, did in fact serve their purpose, but relations were prickly. Air Vice-Marshal Johnson reported in March 1942 that 'The various United States forces are trying to co-operate with the corresponding Canadian forces but it is apparent that they are not co-operating with each other.' The American army and navy representatives rarely met, he noted, while the US Army Air Forces interceptor and bomber commands normally dealt with each other through their general commanding in San Francisco, although their offices were in the same building in Seattle.[21] Such criticism was returned in kind. From the date of the appointment of a Canadian commander-in-chief West Coast Defences that same month, almost a year passed before a joint headquarters organization was created whose effectiveness, even then, 'seemed doubtful to U.S. observers because of unco-operative service attitudes.'[22]

Yet Canadian-American co-operation there was, and it led to an important early benefit in the form of radar equipment. Immediately after the Pearl Harbor attack, the US War Department asked permission to install what the Canadians still called 'radio direction finding' equipment at two sites on Vancouver Island. The RCAF had been aware of British radar developments since early 1939, but nothing had been done to install RDF equipment on west coast sites. The Canadian government accepted the American offer, stipulating that the detachments be under Western Air Command and that Canadian personnel take over as soon as they were trained. In July, after installing the sets, the American technicians departed. Canada, it should be noted, simultaneously returned the favour. C.D. Howe is said to have insisted on this action, somewhat to the dismay of the Air Council, when he received US requests for radar equipment to improve that in the Panama Canal Zone. Thus the first few early warning sets off Canadian production lines – more effective than existing American equipment – went to the United States, and in February 1942 a small RCAF party went to the Panama Canal to install them and instruct American operators in their use.[23]

In February Stevenson also revived an earlier scheme for RCAF coast watchers along the uninhabited west coast of the Queen Charlotte Islands as an early warning network for Prince Rupert. Each manned by a woodsman, two radio operators, and 'a man with some cooking and camping ability,' eight detachments of No 1 Coast Watch Unit were put ashore in isolated areas that provided a good seaward view and covered harbour entrances suitable for enemy landing operations.[24] The coastline was rugged, the weather often poor, and the sites reflected these difficult conditions. Typical was tiny Hibben Island, where the lookout and radio cabin were perched on the edge of a high cliff, and where



there were many 'successive days when landing with any safety for man, boat, or cargo was impossible.'[25]

Enemy activities were conspicuous by their absence. Other than some attacks on merchantmen off California in late December 1941, there had been no interference with trade. The only Japanese warships off North America were large submarines, I-boats, each carrying a two-seat folding seaplane, which occasionally watched US ports for naval activity. There was a shore bombardment by I-17 near Santa Barbara, California, on 23 February 1942, followed the next night by jittery gunners firing over 1400 rounds of anti-aircraft ammunition against imaginary targets in the 'Battle of Los Angeles.' Among other false alarms the minesweeper HMCS *Outarde* reported a submarine off the north end of Vancouver Island on 1 January 1942, and a Bolingbroke of 8 (BR) Squadron reported another on 5 February. Later that month the RCAF went on alert because the US Army in Honolulu reported the approach of a large air fleet that was actually US Navy planes arriving ahead of schedule.[26] Ships continued to move independently and relatively safely without convoys or escorts. At the navy's request, apparently more with an eye to intelligence gathering than the defence of shipping, the RCAF photographed all vessels in coastal waters hoping to identify any submarines disguised as surface vessels.

As early as mid-1941 RCAF intelligence officers in British Columbia had been questioning the wisdom of 'taking a chance' on Japanese loyalty.[27] New RCAF stations were for the most part in isolated areas and lacked adequate defence arrangements. Western Air Command, in spite of advice given by the chiefs of staff, was accordingly more sensitive than the army and navy on the west coast to possible espionage and sabotage. After Pearl Harbor, on 2 January 1942, Stevenson bypassed the Joint Service Committee and wrote directly to Air Force Headquarters to recommend removal of all Axis aliens from the coast. Security, he argued, 'cannot rest on precarious discernment between those who would actively support Japan and those who might at present be apathetic.'[28]

Civilian reaction to the presumed Japanese threat paralleled that of Stevenson, persuading the Cabinet War Committee to authorize the removal of the entire Japanese population from the west coast in late February 1942.[29] Indeed, feelings in British Columbia were at such a high pitch that they overcame the best advice the chiefs of staff could give the government. There was a strong popular belief that Ottawa was out of touch with the real danger of enemy attack on the Pacific coast; public concern was fired by the media, with their vested interest in crisis and simplistic analysis. The Canadian general staff, Bruce Hutchison wrote scathingly in the Vancouver *Sun*, still had not grasped that the Axis powers were pursuing a strategy of global encirclement. British Columbia was in the front line and the government refused to send reinforcements. In mid-March the *Sun* ran another series of articles, in the local news section of the paper, that purported to reveal serious differences between west coast commanders and their superiors in Ottawa. British Columbia, forecast the author, Alan Morley, would never be defended because the politicians did not understand military affairs. As for the military men, they were 'in awe of the politicians and [were]... aged, ineffective, mentally incapable of initiative or strong action, [and had]...

resolutely persisted in "paper-war" routine when they should have been organizing this coast for total war defense.'[30] As C.P. Stacey has observed in the official history of Canadian war policies, *Arms, Men and Governments*, the frightened voters of British Columbia forced the military advisers of the government, through the Cabinet, to sanction much more defence effort in western Canada than was necessary.[31]

Probably only the RCAF – forming the first line of defence – needed bolstering, and even there the threat was not great, so that only a limited response was required. When Stevenson declared himself on the Japanese question in January, drawing a reprimand because he had not gone through the Joint Service Committee as he should have done, he had been faced with a particularly vexing tactical problem. The scenario he painted in February 1942, of enemy aircraft carriers making a night approach, launching bombers at dawn very close to shore, and running to seaward to be overtaken by returning aircraft and covered by ship-borne Japanese fighters, was well within the bounds of possibility. As Air Vice-Marshal Johnson agreed, Western Air Command could have done virtually nothing about it.[32] Still, even after receiving reinforcements, airmen on the west coast again accused Air Force Headquarters of deliberately sacrificing Pacific coast defence to satisfy other priorities. Removed by such a great distance from Ottawa, the airmen (and no doubt the soldiers and sailors as well) had absorbed some of the local malaise.

In April the Joint Service Committee on the west coast issued a new appreciation of the situation, the language of which indicates a compromise between the acknowledged strategic priorities of the Allies and the demands of the local population.

> The Japanese people are now flushed with victory and the consciousness of a crushing military and moral defeat inflicted by them on the Anglo-Saxon nations will undoubtedly have induced the peculiar form of savage exhaltation to which they are prone ...
>
> The Naval, Military and Air strength which the United Nations dispose in the Eastern Pacific, and on the Pacific Seaboard of the North American continent, is based upon the fundamental premise that the decisive theatre of war is not in the Pacific and that diversion, beyond the minimum necessary for reasonable security, would be the result which the enemy is everywhere striving to attain.
>
> Complex considerations of national prestige and public morale demand, however, the allocation of sufficient force to provide reasonable insurance against all predictable scales of attack and, at the same time, to satisfy public opinion.[33]

The first component of such insurance, 14 (F) Squadron (Kittyhawks), arrived at Sea Island in early April in place of No 111 (F), which had moved to Patricia Bay in January. These and later squadrons were to benefit from greatly improved facilities. Construction was now under way for two new airfields on Vancouver Island, at Tofino near the Ucluelet seaplane station, and at Port Hardy near Coal Harbour. At Comox and Cassidy on the east side of Vancouver Island, and at Boundary Bay, Abbotsford, Dog Creek, Williams Lake, Quesnel, Prince

George, Vanderhoof, Smithers, Woodcock. and Terrace on the mainland, more airfields and landing strips were in various stages of planning or building.[34]

Stevenson did his best to match these developments with improved co-ordination of operational control. In accordance with Chiefs of Staff Committee policy, the command's headquarters had moved from its original Vancouver location to Belmont House, Victoria, on 24 November 1939 in order to be near the local naval staff, but as on the east coast, the joint operations room ordered by the committee had still not been created. In February 1942 the Joint Service Committee agreed on the need for this facility, and the Cabinet War Committee approved the proposal for both coasts on 18 March when it created the position of commander-in-chief West Coast Defences.[35]

There was no easy agreement on the room's location. Stevenson doubted the suitability of Victoria, connected as it was to Vancouver by three vulnerable underwater cables and far removed from such key areas as Prince Rupert, but on 10 April the committee voted against moving to the mainland because of the possible adverse effect on public morale. Two months later the committee agreed to construct a headquarters in the Colquitz area of Victoria. Lieutenant-General K. Stuart, the chief of the general staff, was then in Victoria and discussed the problem with Stevenson and others; he opted for a move to Vancouver because it was on the mainland. He implemented this change after he personally took over the position of commander-in-chief West Coast a few days later. The Colquitz site was developed as a smaller tri-service headquarters for the forces on Vancouver Island only.[36]

In Vancouver, three separate operational headquarters sprang up in close proximity, each with its own operations room, and the only combined operations room was one created for the service chiefs. These final arrangements were far from satisfactory, and after Major-General G.R. Pearkes took over as commander-in-chief in September the Joint Service Committee 'noted with regret ... that the close physical contact between the Operations Staff of the Services which had been aimed at and which was considered so desirable' did not exist.[37]

In the meantime at the 'Arcadia' meetings in Washington from late December 1941 to early January 1942, British and American staffs judged there would be little likelihood of a Japanese attack in force upon the North American west coast. American reinforcements could therefore safely be sent to advanced posts in Hawaii and Alaska.[38] Prince Rupert, BC, was an excellent harbour with the most northerly coastal railhead in the west, and ABC-Pacific-22 specifically authorized the United States Army 'to establish such facilities as may be required at Prince Rupert for the supply of US Troops in Alaska ...'[39] The Canadians gave this project their wholehearted support, and on 5 April 1942 Prince Rupert officially became an American subembarkation port.[40]

Canadians had been concerned about the inadequacy of Prince Rupert's air defences even before this time. There was an RCAF seaplane base at Seal Cove, only a mile north of the port, but without a land runway there could be no fighter protection. A long and exhaustive search had revealed no suitable site on Canadian territory. Concerned about defence of the Alaskan Panhandle, the

Americans had developed an airfield on Annette Island, about sixty miles northwest of Prince Rupert, but could not spare any air combat units to man it. Now the interests of the two countries coincided. The senior Canadian and American west coast service commanders discussed Prince Rupert's defences in Seattle on 6 March 1942. Stevenson tentatively suggested that it might be possible to deploy an RCAF fighter squadron to Annette as an interim measure. Lieutenant General DeWitt, whose Western Defense Command included Alaska as a subordinate command, welcomed this proposal, and within a month it was agreed to by both sides.[41]

No 115 (F) Squadron, under the command of Squadron Leader E. Reyno, went to Annette Island. Still equipped with twin-engined Bolingbrokes modified by the fitting of a belly-pack of forward-firing machine-guns, the squadron completed the move by 5 May and assumed responsibility for the fighter defence of Prince Rupert and its approaches. Western Air Command recognized that these aircraft had limited fighter value, but felt that the airfield conditions at Annette made it undesirable initially to transfer a more suitable type such as Kittyhawks.[42] The squadron enjoyed a special distinction nevertheless: it was the first Canadian force ever based in US territory to assist directly in American defence, a situation that created some unusual problems. The question of American customs duties on equipment and supplies, for instance, had to be solved by US Secretary of State Cordell Hull designating all personnel of the unit as 'distinguished foreign visitors' and so granting free entry of goods. The 'distinguished visitors' were themselves unaware and unaffected by this customs dispute. Their work remained under the operational control of the Canadian officer commanding, Prince Rupert Defences.[43]

As 115 (F) Squadron took up its new duties, the Japanese were preparing a strike against Alaska. In order to establish a defensive perimeter around newly conquered territory and force a decisive engagement with the American fleet, strategic points in the Aleutians, at Midway Island, and on the Hawaii-Australia supply line were to be seized to allow the detection and interception of American forays from Pearl Harbor. In addition to diverting American attention from the central Pacific, the Aleutian occupations would also prevent the United States from launching an offensive from the north Pacific and obstruct American-Soviet collaboration. Patrol planes from these islands would be able to detect any force raiding Japan's inner defences.[44]

The key position was Midway Island. On 5 May 1942 Imperial General Headquarters in Tokyo radioed the order for the Second Mobile Force to strike the Aleutians first in early June, followed a day later by the main force attack on Midway. United States Intelligence intercepted and decoded most of this message, obtained vital supplementary information on 20 May and over the following few days, and dispatched naval task forces to meet the threat. Most strength went to the defence of Midway, but a small North Pacific Force, Task Force 8 under the command of Rear Admiral Robert A. Theobald, steamed north for the protection of Alaska. All local army and navy forces were placed under Theobald's command.[45] Air reinforcements urgently needed to repel the attack, and not to be found in sufficient strength

from the limited resources of the United States, had to come from the RCAF.

President Roosevelt already had implied that Canada ought to play a larger part in Pacific defence, especially in Alaska and the Aleutian Islands, and on 27 April the PJBD had agreed that local commanders, US and Canadian, should be ready to send air units to Alaska if necessary. The chief of the air staff ordered Western Air Command to comply, but he was uneasy about the decision in view of the Joint Service Committee's appreciation of 1 April. The RCAF barely had enough strength to protect Prince Rupert and to escort American coastal convoys, and Breadner emphasized that Canadian reinforcements should be limited to the Panhandle.[46] Tentatively, one Bolingbroke and two Kittyhawk squadrons were available in an emergency. Circumstances permitting, 111 (F) Squadron would go to Annette Island; 14 (F) and 8 (BR) Squadrons to Whitehorse for onward dispatch to Alaska. There was a planning meeting with the local American air staff,[47] a PJBD meeting on 27-8 May 1942, and an apparent consensus that 'there was no intention of affecting the basic responsibilities for the defence of Alaska as defined in Plan ABC-22.'[48] By then, however, strategic developments of which the Canadians were not fully aware had overtaken events.

If the Canadian chiefs of staff had been kept fully in the intelligence picture, the complicated and occasionally irascible negotiations that now took place could probably have been concluded with far less difficulty than they were. As the Chiefs of Staff Committee observed, the only information they received about Japanese intentions was at second hand or from US Navy dispatches. When news arrived from the west coast on 21 May, relaying American warnings of the day before that Japan was about to attack Midway Island and the Aleutians, the Canadians' immediate concern was for Prince Rupert. Over the next eight days Stevenson, in consultation with the commander-in-chief West Coast, Major-General Alexander, devoted his efforts to reinforcing Annette Island. At the same time Stevenson's and Alexander's American counterparts, Brigadier General Simon B. Buckner, Jr, commanding Alaska Defense Command, and Brigadier General William Butler, commander of the subordinate Eleventh Air Force, had ordered all spare US combat aircraft forward to meet the known threat to Dutch Harbor.[49] They wanted to fill the resulting gap in Alaskan air defences with two Canadian squadrons at Yakutat, half way between Annette Island and Anchorage. This the Canadian chiefs of staff refused to do. Why leave Prince Rupert exposed to a raid which, so far as Mackenzie King was concerned, was 'about to be made on Alaska and probably on our Pacific Coast'?[50]

The chiefs decided that 8 (BR) (Bolingbroke) and 111 (F) (Kittyhawk) Squadrons would move from Patricia Bay and Sea Island to Annette Island where they would provide a striking force and effective fighter protection for the Prince Rupert area; two Kittyhawk squadrons, 118 (F) from Dartmouth, NS, and 132 (F) from Rockcliffe, Ont., were to move west to Patricia Bay and Sea Island. If the squadrons at Annette should be required to move yet further north, where they would be under American control, 118 Squadron would shift to Annette. No 14 (F) Squadron from Sea Island would replace No 118 at Patricia Bay.[51]

General DeWitt was upset when Stevenson informed him of these plans. He and Buckner asked that 8 and 111 Squadrons be sent straight to Yakutat, and Buckner also wanted authority to move them to Kodiak, Anchorage, Cordova, or Cold Bay if necessary. It so happened that these conversations coincided with the arrival in Victoria of the Canadian chief of the general staff, Lieutenant-General Stuart. When he heard of the requests on 30 May Stuart agreed that complying with them would deprive British Columbia of adequate air defence. He telephoned his opinion to Air Force Headquarters, and received assurance that no such move would take place until the situation became clearer and the reinforcing squadrons had reached the coast.[52] It was a logjam, and not until 1 June, two days later, could it be cleared.

DeWitt had telephoned the War Department in Washington after hearing of Stuart's position, asking for help in arranging for the Canadian squadrons at Annette to be sent to Yakutat, at least until 8 June. This appears to have been the first mention of a time limit on the commitment. On 1 June, Lieutenant General S.D. Embick, an American member of the PJBD, phoned Air Marshal Johnson to request formally the move to Yakutat in accordance with the provisions of ABC-22, stating with some irritation that American forces in Alaska were being moved further out and implying that new US squadrons would be available to replace RCAF units after 8 June. After discussing the possible effects of the move, and taking into consideration the time limit mentioned, the Canadian chiefs of staff agreed that the RCAF should comply with the American request. Within a few hours orders were on their way to move the squadrons to Yakutat. Behind them, 118 (F) Squadron left Nova Scotia during the first week in June for Patricia Bay. En route its destination was changed to Annette Island.[53]

No 8 Squadron moved first. On 2 June the Bolingbrokes departed Sea Island for Yakutat by way of Annette Island and Juneau, followed by two Stranraers carrying groundcrew and essential spares. There were no air navigation maps of the terrain north of Prince Rupert, and the squadron made do with a few Admiralty charts as far as Juneau. There the last leg of the route had to be traced from local maps before the aircraft could fly on. Ten Bolingbrokes and the two Stranraers arrived at Yakutat on 3 June, the day the Japanese attacked Dutch Harbor. On the request of the local American commander, one Bolingbroke carried out a short patrol of Yakutat Bay, the first operational mission in support of Alaska Defense Command.[54]

On 4 June Wing Commander G.R. McGregor, who had previously won the Distinguished Flying Cross during the Battle of Britain, arrived to assume command of all local RCAF personnel. That day the squadron received its first direct operational order from Alaska Defense Command: all aircraft were to stand by armed with bombs. The armourers immediately discovered that the bomb shackle adapter rings – designed by 3 Repair Depot in Vancouver to take US ordnance – would only fit one size of American bomb, one that was not stocked in Alaska. New adapter rings were hurriedly made in Canada and flown north to reach the squadron of 8 June.[55]

Dutch Harbor, in the Aleutians, was now under attack. The enemy force launched air strikes from carriers against the port on 3 and 4 June. The crushing

defeat suffered by the Japanese main force at Midway on the 4th, which made impracticable any Japanese major offensive beyond the original conquest perimeter, undermined the strategic purpose of the Aleutian operation. Nevertheless, the commander of the Northern Area Force, Vice-Admiral Boshiro Hosogaya, received orders to finish what he had begun. His forces occupied the islands of Kiska and Attu, far out in the Aleutian chain, on 6 and 7 June, respectively. At first the Japanese saw their presence as temporary, with the force to be withdrawn before winter. Without Midway, the islands had little value for patrolling the ocean approaches to Japan from Hawaii. They did block any (unlikely) American use of the Aleutian route to Japan, however, had a nuisance value, and doubtless helped to boost Japanese morale after the defeat at Midway. By the end of the month, the Japanese had decided to stay.[56]

Buckner now redeployed his resources, and on 5 June ordered the Canadians (who comprised no less than a fourth of his air combat units) to move at once to Elmendorf Field, Fort Richardson, outside of Anchorage. This served as the final staging base for squadrons moving forward to carry the offensive against the new Japanese positions. McGregor immediately signalled Western Air Command for authority to comply. If the wing was to get into battle, he explained, it would have to advance. It was less difficult to get authority than to exercise it. Neither 8 Squadron nor the Yakutat airfield staff had maps of the route north or knew the necessary recognition signals. In response to McGregor's urgent request both arrived the next day, but bad weather scattered the Bolingbrokes during the trip north. All finally gathered at Elmendorf Field on the 7th, where the squadron diarist reported: 'Air Base Headquarters require Blbks to be held in readiness twenty-four hours per day.'[57]

No 111 (F) Squadron had only one suitable map available, so its aircraft staged through Prince George and Watson Lake to Whitehorse, where they were met with maps for the rest of the trip. On the 8th the Kittyhawks flew on to Anchorage, with a stop at Yakutat. More Kittyhawks, equipped with belly tanks, flew north along the coast a few days later, to bring the squadron up to strength on the 24th. The deployment of the two squadrons had quickly brought home to the Canadians the greatest hazards of Alaskan operations: long distances between bases and generally poor weather conditions, compounded by inadequate meteorological information, especially in route forecasts.[58]

McGregor established 'X' Wing Headquarters as a contact point between the RCAF and Alaska Defense Command. At Elmendorf Field the Canadians were part of the force assigned to protect Anchorage from Japanese bombing raids – but there were no such raids nor any great likelihood of them. It would have been a foolhardy Japanese carrier force that ventured into the Gulf of Alaska after Midway. All the action in that theatre was therefore concentrated against the enemy outposts on Kiska and Attu, and that was where the Canadians now wanted to be. As early as 11 June, 8 Squadron daily diary recorded that the 'possibilities of unit seeing combat whilst based here seems extremely remote.' McGregor agreed, and expressed his reservations to Air Vice-Marshal Stevenson, who visited Elmendorf on 18-19 June. Stevenson could give no estimate of how long the RCAF would stay in Alaska but he instructed the two squadrons to

be kept together as a composite wing if possible, and gave McGregor discretion to transfer the units within Alaska as necessary.[59]

On 13 June, after a week on ground alert, 8 (BR) Squadron started anti-submarine patrols of the Gulf of Alaska from Kodiak to the east, and then back to Anchorage by way of Prince William Sound. Kodiak was better sited for these tasks, and occasionally a detachment worked out of that field when a convoy was in the area. By the end of the first month it was evident that the squadron's real problem was supply and maintenance for its British-designed Bolingbrokes, because only American spares were readily available. Spark-plug shortages were especially critical. By 13 July there were only enough to change the plugs on two aircraft, and on the 23rd only one of the seven aircraft at Elmendorf was serviceable, three others having been sent to Nome. Four days of total unserviceability followed, during a rare period of fine flying weather. In October, the Elmendorf aircraft were grounded again for over a week because there were no felt elements for oil filters.[60] Without a reliable supply system for its special parts, the squadron was never able to become fully operational.

In Washington the Joint Chiefs of Staff met on 15 June to discuss the Japanese occupation of Attu and Kiska. They concluded that these bases could be part of a screen for a northward thrust into the USSR's maritime provinces and Kamchatka Peninsula. Even though climate and topography made large-scale operations quite impracticable, the Joint Chiefs warned that additional Japanese objectives might include St Lawrence Island and Nome and its adjacent airfields. American air force reinforcements were immediately sent to Nome. On 27 June 'X' Wing was also warned for Nome, but then told a few days later that it would probably not be needed since an additional USAAF squadron was available if required. This incident seemed to substantiate the opinion already formed by Wing Commander McGregor that the Canadians were seen essentially as a convenient rear-area security force.[61] 'It is again evident,' he wrote to Stevenson at the end of the month, 'that Canadian Squadrons will only find themselves in a location likely to result in active operations as a result of some completely unforeseen enemy attack ... the greatest care will be taken to insure the Canadian Squadrons will not see action if it is possible to place U.S. Army Air Corps Squadrons in a position to participate in such action, even if the said U.S. Squadrons are much more recent arrivals in Alaska.'[62] McGregor recognized the useful role played by 'X' Wing in freeing American units from Anchorage's defence, but wondered if this use of two scarce Home War Establishment operational squadrons was in the best interests of the RCAF.[63] The Canadians had to move forward if they were to meet the enemy.

The minister of national defence for air, C.G. Power, the chief of the air staff, Air Marshal L.S. Breadner, and Stevenson supported this position in discussions with the American commanders when they visited Anchorage on 4 July, and General Butler expressed his willingness to comply. On the 6th he proposed that all of 111 (F) Squadron's pilots and selected groundcrew members, over half the unit, go forward to Fort Glenn on Umnak Island, the most advanced of the American bases. There they would relieve an equivalent number of personnel from the P-40 equipped 11th Fighter Squadron, USAAF.[64]

On 13 July 1942 Wing Commander McGregor and the first group of six pilots started west in Kittyhawks via Naknek and Cold Bay, followed by transports carrying extra pilots, groundcrew, and support staff. It was an unlucky trip. One Kittyhawk was accidently lost and another damaged on the first leg, but fortunately both pilots were saved, and two replacement fighters were brought forward to join the others. Bad weather delayed the last two legs until the 16th, and then tragedy struck. Shortly after passing Dutch Harbor the fighters ran into more bad weather, and McGregor ordered them to turn back. As the other aircraft followed him in the turn they lost contact. Squadron Leader J.W. Kerwin, Pilot Officer D.E. Whiteside, Flight Sergeant F.R. Lennon, Sergeant S.R. Maxmen, and Flight Sergeant G.D. Baird disappeared in the fog. The first four crashed into Unalaska Island; Baird was never found. McGregor himself later narrowly missed a rocky ledge as he circled low on the fog's edge for half an hour calling them. Only one answered. This fighter continued on to Umnak and landed through the only available break in the cloud cover, while McGregor returned to Cold Bay to organize a search. The transports completed the trip safely.[65]

Umnak was a bare, treeless island, covered in volcanic ash and tundra. At the American base, Fort Glenn, the runway had been operational for less than two months, the men slept under canvas (five to a tent with a sleeping bag and four blankets each), and for the first month did without tent floors. Commanding the 11th Fighter Squadron was Major John S. Chennault, the son of Major General Claire Chennault, who had led the American volunteer group in China – the famous Flying Tigers. He and McGregor, together with General Butler, and with the approval of Air Vice-Marshal Stevenson, agreed that the Canadians would work with the 11th Squadron using USAAF machines. There would be no more ferrying of Canadian Kittyhawks until they had belly tanks fitted. On 24 July, after several days of familiarization flights, and the day after forming an all-Canadian 'F' Flight, the RCAF pilots began flying their own defensive patrols. By 15 August Canadians had begun taking their turn on fighters flying from a new satellite field ten miles away.

On 20 August Squadron Leader K.A. Boomer, accompanied by four replacement pilots, arrived at Elmendorf Field to take command of the squadron. By this time 8 (BR) Squadron had moved a detachment of three Bolingbrokes to Nome for patrols over Norton Sound and the Bering Sea. A small ground party from No 8 departed by air transport on 13 July, but bad weather prevented the Bolingbrokes from attempting the trip until the 17th and 18th.[66]

Nome was a small, isolated, turn-of-the-century gold-rush town, situated in low, rolling tundra. There were two gravel runways, no hangars, and canvas accommodation. At this dreary place the Canadian detachment shared patrol duties with the air echelon of the 404th Bombardment Squadron (Consolidated B-24 Liberators), while the Bell P-39 Airacobras of the 56th Fighter Squadron carried out local fighter protection until October. At first two Bolingbrokes stood by as an anti-submarine striking force, while the detachment flew daily, single-aircraft patrols southwards to Nunivak Island, returning by way of Stuart Island and Norton Sound. Soon, coastal patrols northwards were added. On 21

August the 404th Squadron's B-24s, which had been carrying out distant patrols to St Lawrence Island, withdrew for operations in the Aleutian chain, and 8 Squadron's detachment took over their task as well.[67]

In the meantime American and Japanese commanders in the Aleutians were at a standoff. Both were starved of material because other war theatres enjoyed higher priorities; both struggled against vile weather. Of twenty-four 'Rufes' – seaplane versions of the 'Zero' fighter – brought out in July, only two were operational. The only other Japanese combat aircraft in the theatre, flying boats, had no noticeable effect on operations. Believing Kiska threatened because of repeated air attacks during the summer, the Japanese had reinforced that island from Attu. The Americans, in order to keep up the pressure, stepped down the Aleutian chain to Adak Island, just over 200 miles from Kiska. They moved in on 30 August and had an airstrip of perforated steel planking in place fifteen days later. On 14 September aircraft were taking off for raids on Kiska. Over the next week or so, reinforcements flew in from Umnak, including Canadians from 111 (F) Squadron: Squadron Leader K.A. Boomer, Flying Officers J.G. Gohl and R. Lynch, and Pilot Officer H.O. Gooding, flying P-40Ks with long-range tanks. A Canadian-American attack went in on the 25th, with fighters providing close and top cover; all strafed naval craft and ground targets after the bombers had finished their run.[68]

At approximately 1000 hours the Canadians swept low across little Kiska Island towards the North Head of Kiska Harbor. There they struck gun positions and then the main Japanese camp area and radar installations. Coming back for a second pass they met the two 'Rufe' seaplanes which had taken off to meet the attackers. The enemy leader attacked an American P-40, and was attacked in turn by Boomer. 'I climbed to a stall practically, pulled up right under him. I just poured it into him from underneath. He flamed up and went down.' The Japanese pilot jumped from his aircraft just before it hit the sea. Shortly after, Major Chennault downed the other Rufe. Then the Canadians joined some Americans attacking a surfaced submarine. Having expended their ammunition, the fighters rejoined the bombers and returned to Adak. Both the main island and Little Kiska had been thoroughly strafed, causing fires and explosions. Claims included the two Rufes, and five to eight float biplanes probably destroyed. All the Canadian and American P-40 pilots were awarded US Air Medals for this 'hazardous five hundred mile overwater flight' in single-engine aircraft. Boomer was also awarded the DFC. He had won the only air victory by a member of the Home War Establishment, and became the only member of an RCAF squadron to be credited with air victories against both the Germans and the Japanese. He was later killed in action over Germany in 1944.[69]

Canadians took no further part in offensive operations in 1942. In mid-October 111 Squadron moved back to Kodiak where on some days 'conditions were so poor that even the birds were walking.' When they could, the airmen flew defensive patrols from both the main Fort Greely air strip and a satellite field at Chiniak Point. At other times they endured the winter weather, and were able to break the tedium with squadron dances, USO shows, nightly films, sports parades, and, in some cases, semi-annual leave in Canada.[70]

At Nome the 8 Squadron detachment gradually found life more comfortable. Food improved, USO entertainers passed through, and the tented accommodation was replaced by three Quonset Huts the RCAF personnel erected themselves. The detachment's patrols covered the northern Bering Sea, intersecting at Nunivak Island those of the 406th Bombardment Squadron flying from Naknek. The remainder of 8 (BR) picked up the coverage again in the Gulf of Alaska, flying over Cook Inlet, between Kodiak and Middleton Island, and Prince William Sound, turning over responsibility to the 406th Bombardment Squadron near Cape St Elias. South of Yakutat the Alaska Panhandle was patrolled by Annette Island's 115 (BR) Squadron, RCAF, though the squadron came under the operational control of Western Air Command rather than the Eleventh Army Air Force. In the Aleutian chain to the west, the task of covering the North Pacific and Bering Sea approaches to Kiska and Adak belonged to US Navy PBYS.[71]

On 21 October 1942 General Butler ordered patrols from Nome to be discontinued for the winter, and the patrol system was reorganized in November. No 8 Squadron's Nome detachment returned to Elmendorf, and the squadron was given new patrol routes, Red and Blue, which roughly divided the old Elmendorf route in two. As the winter deepened and the cold intensified, there was great difficulty in completing even these tasks. Satisfactory winterization had not been developed for the Bolingbroke, and engine temperatures could not be maintained. Regulators and compressor lines froze. Finally it was decided to base a detachment of three aircraft at Kodiak, where the weather was milder, and carry out all future patrols from there. The detachment arrived at Kodiak on 30 December 1942 and flew its first missions on New Year's Day.[72]

Preparing for the spring campaign, on 12 January 1943 the Americans established a new base on Amchitka, just over fifty miles from the enemy at Kiska. Over the winter Canadian and American commanders took the opportunity to reorganize RCAF forces in Alaska. In March 14 (F) Squadron, with Kittyhawks, replaced 8 (BR) with its obsolescent, inappropriate, and increasingly tired Bolingbrokes. The pleased response of Generals DeWitt and Buckner, as Stevenson thought at the time, probably arose from their desire for a more elaborate air defence of Alaska than Washington was prepared to support. Stevenson agreed to keep the two fighter squadrons in northern Alaska until May, and in the event was to keep them there a few months longer.[73]

As the first of No 8's various air and sea parties started their slow journey south to Sea Island in February, No 14's Kittyhawks began a typical odyssey, dogged by bad weather all the way, to Umnak. The air party was grounded for four days at Port Hardy and another nine at Annette before flying on towards Yakutat. Conditions then were a rare CAVU – 'Ceiling and Visibility Unlimited' – until they reached their destination. Yakutat was closed by fog. With fuel running low, the Kittyhawks pressed on to an emergency strip at Yakutaga, eighty miles away. There was no fuel there, and another four days were spent transferring gasoline from Yakutat before they could get to Anchorage. Poor weather further delayed the Kittyhawks' departure from Elmendorf and hindered their progress through Naknek and Cold Bay so that they took more than a month

in all to reach Umnak Island on 18 March. The ground party quickly turned out to watch the welcome sight as 'the whole Squadron of 15 Kittyhawks arrived over the aerodrome.' The Canadians shared accommodation with the 344th Fighter Squadron, USAAF, until April, when they moved the few miles to Berry Field, a satellite of Fort Glenn. There they became part of General Butler's shore-based air task group (as the Americans called their maritime formations) still under the overall direction of the US Navy's North Pacific Force, now commanded by Rear Admiral Thomas C. Kincaid.[74]

Air Vice-Marshal Stevenson and Wing Commander R.E. Morrow, an overseas veteran who had won a DFC in Europe and had taken over 'X' Wing from McGregor on 1 March, had persuaded the Americans to accept a 'pilots only' Canadian flight on the crowded Amchitka fighter strip. No 14 Squadron was assigned the first monthly tour, and on 31 March twelve selected pilots flew to Adak Island as passengers aboard an American transport. There they spent a few days in final training, broken by ten days of bad weather which culminated in a blizzard on 7 April with winds over 106 mph. The cups on the airstrip's anemometer were blown off. On the 17th the pilots flew forward to Amchitka and offensive operations.[75]

Kinkaid's first objective was Attu Island because intelligence reported that it was less well defended than Kiska. Even against his limited resources he expected that the Japanese, who were having difficulty reinforcing the island and had not been able to complete their planned landing strips, would hold out for no more than three days. The plan was to precede the assault with daily air bombardments against both Attu and Kiska in order to leave the Japanese uncertain as to the point of attack.[76]

So that Canadian airmen could play a part, pilots from 14 Squadron formed a fourth flight in the 18th Fighter Squadron, USAAF. The P-40s did not have the range to attack Attu, and all their offensive sorties were directed against Kiska. This was an important role, supposed to help gain tactical surprise and prevent Attu's reinforcement.[77] Since there was no enemy air opposition, the fighters carried bombs which they dropped on the fixed Japanese installations, and they then carried out as many strafing runs as ammunition and endurance would allow. The pilots established a four-day cycle: the first on operations, the second on rest, the third on alert, and the fourth on defensive patrols or 'flagpole flying.'[78]

The first sortie against Kiska took place on 18 April 1943, and for the next few weeks by far the greatest weight of Kinkaid's air bombardments fell on that island. Not only was this part of the plan, but weather often closed in Attu and led bombers directed there to hit Kiska instead during their return flight. In the last eleven days before the scheduled assault only ninety-five tons of bombs fell on Attu. From 7 to 11 May weather delayed the landing and prevented any further air attack, and when the assault went in on 11 May the Japanese were much better prepared than expected. It took three weeks of intense and bloody fighting, at the cost of over 560 American and 2350 Japanese dead, to recapture Attu.[79]

In mid-May a detachment from 111 Squadron relieved the pilots from No 14, remaining until early in July when another 14 Squadron detachment arrived in

turn. An attempt was made to give as many pilots as possible the opportunity for combat flying while the campaign moved towards its conclusion. Over 34,000 men were assembled for the very stiff fight expected on Kiska. The Japanese, however, evacuated the island on 28 July. Unaware of the withdrawal, the Allies continued to carry out bombing attacks during a break in the weather between 29 July and 4 August climaxing, on the last day, with 134 sorties and 152 tons of bombs dropped. The assault went in as scheduled on 15 August, against a non-existent enemy. With the acquiescence of General DeWitt, 111 (F) Squadron had already started its move back to Canada on 8 August, and 14 Squadron followed on 21 September 1943.[80] The RCAF's Alaskan adventure was over.

Throughout the Aleutian campaign the air force had been careful to meet all obligations for the defence of British Columbia. On 16 June 1942 Western Air Command had raised readiness states and formed No 4 Group Headquarters in Prince Rupert to exercise command and tactical control over the northern RCAF stations at Bella Bella, Alliford Bay, and Prince Rupert, as well as the two squadrons (regrouped on 14 June as 'Y' Wing) on Annette Island. Some Stranraers received long-range tanks under each wing to permit a patrol radius of up to 500 miles. The Bolingbroke fighter squadron on Annette Island, No 115, converted to bomber-reconnaissance, a more suitable role for its aircraft, and a new Bolingbroke squadron, 147 (BR), was formed at Sea Island. The command also obtained three more fighter squadrons in June for air defence: No 132 (Kittyhawks) from Rockcliffe, Ont.; and two new Hurricane units, Nos 133 and 135, formed at Lethbridge, Alta, and Mossbank, Sask., respectively.[81]

Japanese submarine activity in 1942 pointed up the need for such changes. Submarines I-25 and I-26 arrived off the coast in the first week of June to monitor US-Canadian naval reaction to the Aleutian attack; I-26, in the Vancouver-Seattle area, torpedoed the American merchantman SS *Coast Trader* on 7 June west-southwest of the entrance to the Strait of Juan de Fuca, the only such sinking near western Canadian coastal waters during the war. In the early hours of 20 June, I-25 torpedoed and badly damaged the British SS *Fort Camosun* a little further south. That night I-26, on her way home, shelled the lighthouse and radio station at Estevan Point on the west side of Vancouver Island between Ucluelet and Coal Harbour. The submarine commander's regretful note that 'there was not a single effective hit that night'[82] is open to debate. He could not have known that his were the only enemy shells to fall on Canadian soil during the war, nor of the ensuing comedy of errors. Despite a full alert, only one Stranraer squadron, No 9 at Bella Bella, sent off a search aircraft. Because of topographical restrictions, night flying was out of the question at Ucluelet and Coal Harbour, the closest stations. No 32 Operational Training Unit at Patricia Bay dispatched its duty aircraft, a Beaufort bomber, but it crashed on take-off. The Stranraer finally arrived over Estevan Point later that night. Those on the ground could only hear, not see it. And the airmen, still without radar, had no real hope of sighting anything. After an uneventful flight of two hours and twenty minutes, the Stranraer flew home again.[83]

Stevenson could do nothing about equipment so he concentrated on technique. He cut out routine long-range (400 nautical miles) patrols, reduced the activity of each Stranraer squadron to one daily patrol 100 miles deep, and instructed the Bolingbrokes of 115 (BR) Squadron at Annette and the Sharks of 7 (BR) at Prince Rupert to supplement this action with two daily coastal patrols.[84] The time and effort saved was to be devoted to training. Group Captain A.H. Hull, the senior air staff officer, warned the stations that 'certain mishaps have given the impression at Western Air Command Headquarters, that either pilots are not being well trained, or are very inexperienced.'[85] This 'rocket' had the desired effect. An RAF Coastal Command visitor in November reported: 'Although there are very few U/Bs in that area the pilots had far greater knowledge than those of E.A.C. This is due to A.O.C. W.A.C. detailing certain of his staff as A/S staff and distributing Tactical Memoranda and Instructions to the various squadrons. The situation of aircraft in this area is appalling though and, if the Japanese ever thought of sending submarines or surface craft over, the matter would be very difficult.'[86] Appalling aircraft in appalling conditions inevitably took a serious toll. A series of Stranraer forced landings occurred, caused by aircraft overloading, or failure of crews to jettison bombs or excess fuel when in difficulties. On 26 August 1942 all long-range patrols, except for training or special requirements, were discontinued.[87]

On 1 January 1943 No 2 Group Headquarters was formed in Victoria to assume tactical control along the southern BC coast, and the command's main headquarters then made its planned move to Jericho Beach, Vancouver. Because of the expansion of the Home War Establishment, Western Air Command had become a fairly strong and well-balanced force by this time. The three new fighter squadrons – Nos 132, 133, and 135 – were based at Patricia Bay and the new stations of Boundary Bay and Tofino, all for the air defence of the Victoria-Vancouver area. A new 163 Squadron, originally army co-operation and, from October 1943, fighter, was at Sea Island. A torpedo-bomber squadron, No 149, had been formed in October 1942 for anti-surface ship strike duties, but it was redesignated bomber-reconnaissance in July 1943 when it was clear that the Japanese threat had receded. In support were three non-combat squadrons: 122 (Composite), with a mixture of aircraft types; 165 (Heavy Transport), under operational control of Air Force Headquarters; and 166 (Communications) Squadron. No 13 (OT) Squadron had disappeared in late 1942, its personnel and flying boats forming the nucleus of 3 Operational Training Unit, under the command of Western Air Command for all purposes except training.[88]

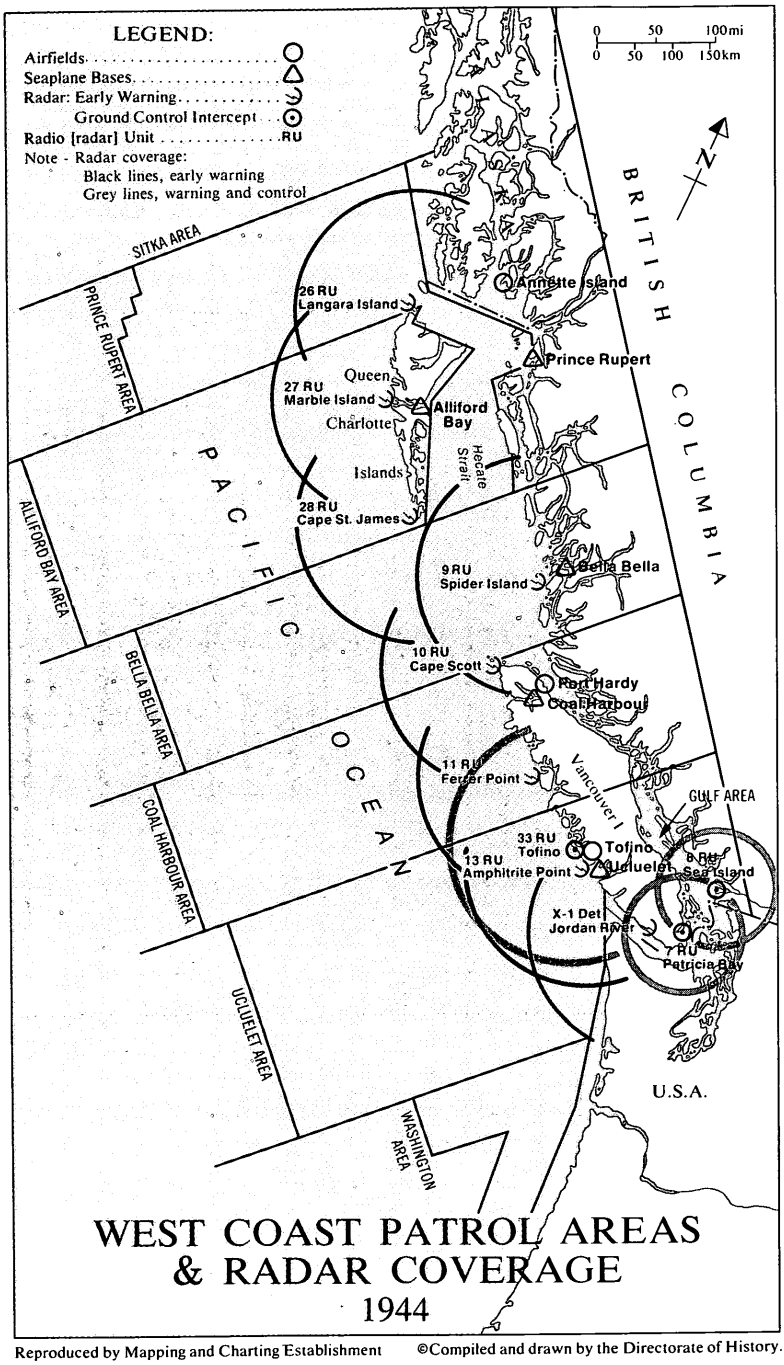
During the same period, all but one of the command's bomber-reconnaissance squadrons re-equipped with more effective aircraft. As a Christmas present, 4 (BR) Squadron took delivery of the west coast's first operational Canso 'A' amphibian in December 1942. By April 1943 each of the five seaplane squadrons – Nos 4, 6, 7, 9, and 120 – operated a few of these long-range aircraft, permitting improved coverage of their patrol areas.[89] Three strike squadrons – Nos 8, 115, and 149 – converted to the twin-engined Lockheed-Vega

Ventura GR Mk V bomber. Only 147 (BR) Squadron retained the aging Bolingbroke, 'a troublesome aircraft to maintain' after years of service on both coasts.[90] It was no longer fun to fly, with 'a nasty habit of running short of oil before running out of gas. The first indication of this is when a propellor flies off. There have been five cases of this ... On frequent occasions, dinghies have come out of their stowage in flight, which is most dangerous ... [In one instance] The tail assembly was apparently damaged by the dinghy, and the aircraft spun inverted into the ground, killing the crew. This naturally does little to increase the aircrew's confidence in their aircraft.'[91]

The chain of radar stations along the coast, interlocking with American coverage, was almost complete by November 1943. The detachments of No 1 Coast Watch Unit were withdrawn after radar coverage of the western approaches to the Queen Charlotte Islands was established. The radar stations provided early warnings of the approach of aircraft to filter rooms located in Victoria and Prince Rupert, where plots could be maintained of enemy locations and courses, and warnings and interception orders sent out as needed. Local control of fighters was exercised from sector control rooms at airfields with fighter aircraft, and two radar stations, at Patricia Bay and Sea Island, were equipped to control night fighters in the air defence of the Victoria-Vancouver area. No enemy ever tested this system, but the radar proved its value in tracking Allied aircraft when they were in difficulty and in passing information to navigators or the search and rescue organization.[92]

The command's airfield-building programme in 1943 largely shifted to a second line of facilities deep in British Columbia, a north-south chain of aerodromes known as the Interior Staging Route. On 1 January 1944 the command also took over responsibility for the North West Staging Route from No 4 Training Command, No 2 Wing Headquarters, Edmonton, being established for this purpose. The wing became a separate command – North West Air Command – on 1 June 1944. A solution had also been found to the last airfield problem in the coastal defence programme: the location of a Canadian fighter strip near Prince Rupert. In fact, there were soon two strips, a steel-mat one near Massett, on the north shore of the Queen Charlottes, and later a second one at Sandspit, near the entrance to Skidegate Inlet, for the support and defence of the seaplane base at Alliford Bay.[93] Both airstrips were alternates for emergency use rather than permanent bases, but they provided vital landplane facilities in the area if needed and permitted the return to Canada of the Annette Island squadrons assigned to the defence of Prince Rupert.

The role of the Annette squadrons had become increasingly inconsequential. After a year out of Canada at the isolated station, the original squadrons were replaced in August 1943 by Nos 135 (F) and 149 (BR). These did not stay long, withdrawing to Terrace, BC, east of Prince Rupert, in November. With the likely scale of attack against the coast now greatly reduced, the command recommended to Air Force Headquarters that squadrons surplus to the new requirements be transferred overseas, converted to an operational training role, or disbanded. Thus, as the Annette squadrons prepared to move back into British Columbia, Nos 14, 111, and 118 (F) prepared to move out. Later taking the new



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numbers 442, 440, and 438, respectively, they joined three fighter squadrons from Eastern Air Command to form part of the composite group providing tactical support for the army in Europe. They sailed for England between November 1943 and January 1944.[94] At the same time, because the 1944 Air Defence of Canada Plan took 'full cognizance of the necessity for economy at Home,' the establishment of flying-boat reconnaissance units was also cut back to the 1941 strength of nine aircraft each, for a loss equivalent to two fifteen-aircraft squadrons.[95]

There was some danger of reduced efficiency in this climate of retrenchment. In January 1944 Air Marshal Robert Leckie, the new chief of the air staff, expressed his concern that for the past six months the command's aircraft and crew had only averaged twenty-five and twenty-three operational hours, respectively, and could not understand why long-range patrols averaged no more than 140 miles. He ordered Stevenson to extend this to 500 miles, even though the risk of enemy activity was very small.[96] 'We have the alternatives,' wrote Leckie, 'of removing the bulk of our force and accepting the risk, or of keeping the force there and using it to reduce the risk from a small one to as near nil as possible.'[97] He was, he said, adopting the second alternative, but in reality he had already begun to implement the first.

Stevenson received word of a revised Air Defence of Canada Plan in February 1944. He and the other members of the Joint Service Committee Pacific Coast were understandably annoyed at not being consulted first, for the plan laid down extensive strength and facility reductions. Nos 2 and 4 Group Headquarters were to disband, leaving only their filter rooms active, and return operational control to Command Headquarters. One reconnaissance, two strike, and one fighter squadron were also to go. Stations at Port Hardy, Prince Rupert, Smithers, and Terrace were to be reduced to care and maintenance, and Boundary Bay reallocated to training duties. As a result, 147 (BR), 149 (BR), and 163 (F) Squadrons disbanded on 15 March, and No 120 (BR) followed on 1 May. With Prince Rupert considered less likely to be an enemy target than the Vancouver-Victoria area, the remaining strike and fighter squadrons redeployed to the latter, the fighter aircraft establishment being raised to eighteen for each unit. Port Hardy, Smithers, and Terrace were reclassified as staging units, and Prince Rupert became an administrative unit.[98] Stevenson was able to oversee these changes before turning his command over to Air Vice-Marshal F.V. Heakes in June 1944.

The next month the Chiefs of Staff Committee re-examined the defence of Canada once more and reduced their assessments of enemy scales of attack. Some form of submarine assault, including the use of small landing parties, remained the most likely danger, either against shipping in the approaches to Victoria and Prince Rupert or against coastal installations and ports, though occasional raids by carrier-borne aircraft or by surface raiders against seaborne trade in the Canadian Zone could not be entirely discounted. This time the Joint Service Committee Pacific Coast was asked to comment. Heakes recommended that aircraft only patrol the approaches to Victoria and Prince Rupert from the west and southwest, and the standard seaward patrol be reduced to 300 miles.

The area in between would not be covered. He proposed closing Bella Bella and Ucluelet. Anti-submarine squadrons would be retained at Alliford Bay, Coal Harbour, and Tofino, and all strike and fighter strength would be concentrated at Patricia Bay. This advice was accepted without reservation, and its effects were soon felt. Nos 9 (BR), 115 (BR), and 132 (F) Squadrons disbanded in September and October. No 4 (BR) moved to Tofino, and 133 (F) and 135 (F) Squadrons, re-equipped with Kittyhawks, were stationed at Patricia Bay along with the Venturas of No 8 (BR), the single remaining strike squadron. Bella Bella went to reduced operational status, and Ucluelet closed down. In an emergency the command could be reinforced by twelve heavy bombers – Liberators from 5 OTU, Boundary Bay – and any reinforcements from the east coast arranged by Air Force Headquarters.[99]

For the rest of the war Western Air Command emphasized training for quick tactical response to any attack. 'The basis of our work is mobility,' wrote Heakes, who acted very much as a 'new broom.' All squadrons were kept at short notice to move for operations from other bases. The command centralized operational control, a procedural change made possible by the introduction of a new Pacific coast communication system that also proved of considerable value to the other two services, and by the establishment of a high frequency/direction-finding system controlled from the combined operations room in Vancouver. Exercises were run regularly, with US forces participating in some and with the RCN joining in others for simulated convoy operations.[100]

An unpleasant interruption to this routine occurred in November 1944, when the Canadian government reluctantly approved the dispatch overseas of army conscripts, and disturbances broke out throughout the country. The worst incident was at Terrace, BC, where approximately 1600 men of 15 Infantry Brigade armed themselves and took over the camp on 25-6 November. On the 28th, the brigade requested an unarmed flight over Terrace to demonstrate that force was available if required. An eight-aircraft detachment of 8 (BR) Squadron flew to Smithers the following day, ostensibly on one of the command's 'mobility' exercises. They carried no bombs, but Dakotas transporting the groundcrew also brought ammunition. Immediately after arrival the Venturas were sent out on a 'training flight,' but were forced to turn back because of bad weather. The next day crews were maintained at one-hour notice until the flight over the army camp was cancelled on orders from the chief of the general staff. At Terrace, the brigade's senior officers, who had been at a meeting in Vancouver, returned and regained control. The air party returned to the coast, well nourished with moose meat, a highlight of the daily menu at Smithers.[101]

The Japanese, though pressed back towards their homeland, had one more offensive weapon to use against North America: armed balloons. In January 1945, as a defensive measure against these weapons, the fighter squadrons of Western Air Command took turns stationing two aircraft at Patricia Bay and two at Tofino in a condition of constant readiness. Further east, No 2 Air Command kept a handful of Hurricanes on alert at scattered stations in Alberta and Saskatchewan. The origin of this threat lay in a Japanese decision to retaliate for the USAAF Tokyo air raid of mid-1942 by attacking North American forests with