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THE Canadian Magazine

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THE WAR STORY OUR LEADERS KEPT QUIET

How Paul Hartwig
and his U-boat
attacked Canada
and won

Also:
Punch Imlach's hat
has made the
Hockey Hall of Fame
French fries and
fiddleheads from
Florenceville, N. B.—a
\$60,000,000 business



The front page story in *The Canadian Magazine* by Peter Moon in February 1972 that did much to stimulate renewed interest in the St. Lawrence battle.

Adventures in Government History

The Origins of *War in the St. Lawrence: The Forgotten U-Boat Battles on Canada's Shores*

Roger Sarty

Most books are to some extent autobiographical. They trace an author's intellectual journey. *War in the St. Lawrence: The Forgotten U-Boat Battles on Canada's Shores*¹ is more autobiographical than many. The journey unfolded over a period of forty years, although with numerous and sometimes prolonged interruptions.

I first became aware of the battle with the U-boats in the St. Lawrence in 1972 when the investigative journalist Peter Moon published "The Second World War Battle We Lost At Home" in the *Toronto Star's Canadian Magazine*.² The piece was built on interviews with Rear-Admiral Paul Hartwig, of West Germany's navy. As a young officer he had commanded *U-517*, far and away the most successful of the 15 German submarines that operated in the St. Lawrence during the Second World War. His U-boat destroyed nine of the 23 ships sunk by enemy action in the St. Lawrence. Hartwig's skill and boldness did much to convince an alarmed Canadian public and discouraged Canadian military commanders that their country's maritime forces had been decisively defeated.

When I began to study naval history later in the 1970s, I discovered that the Canadian navy's own official histories, published in 1950 and 1952, also classed the St. Lawrence operations as a defeat.³ Only later,

Abstract: This memoir relates the author's formative professional experience during the early 1980s when he researched the role of the Royal Canadian Air Force in the defence of the Gulf of St. Lawrence against German submarines during the Second World War. He undertook this work at the Directorate of History at National Defence Headquarters in Ottawa as a junior member of the team that assisted W.A.B. Douglas in the production of *The Creation of a National Air Force*, the second volume of the official history of the RCAF. The memoir explains the challenges of this pioneering research on the role of aircraft in anti-submarine warfare. That work provided the basis for further research on anti-submarine warfare for the directorate's new official history of the Royal Canadian Navy, and inspired the author's own recent book *War in the St. Lawrence*.

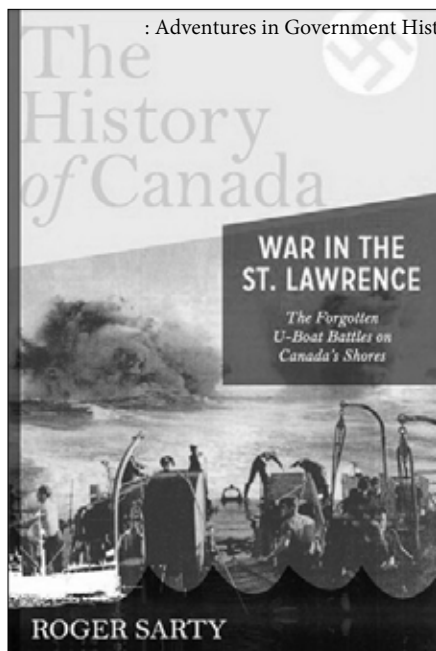
when I joined official histories unit in the Department of National Defence, did I learn that the navy histories were incomplete. Still more incomplete – almost non-existent – were accounts of the maritime squadrons of the Royal Canadian Air Force that had played a critical role in supporting the navy, not least in the St. Lawrence.

Only the Canadian Army's Second World War historical program survived deep cuts in the defence budget in 1947-1948.⁴ By that time Dr. Gilbert N. Tucker, the naval historian, and his team had produced a fully researched volume on the

navy's "Activities on Shore" covering such topics as shipbuilding, base development, and the recruitment and training of personnel, and the naval control of merchant shipping. Tucker refused to rush ahead with a planned volume on operations at sea, because his team did not yet have access to such essential sources as high level intelligence files and the captured records of the German navy. Tucker, in fact, resigned. The naval staff commissioned Joseph Schull, a well known popular writer who was serving as a uniformed public relations officer, to produce a book as quickly as possible on the basis of Canadian operational reports that had been gathered by the team during the war. This was the genesis of Schull's *The Far Distant Ships: An Official Account of Canadian Naval Operations in the Second World War*.

The air force, by contrast, abandoned its planned volumes on the air force's vast wartime organization in Canada, including Eastern Air Command. The latter, with its headquarters in Halifax, was the counterpart of the navy's Atlantic Coast command, and was responsible for air operations in eastern Quebec, the Maritime Provinces and Newfoundland and as far out into the Atlantic as its patrol bombers could reach.

In 1965 the Department of National Defence combined the Army Historical Section with the small navy



and air force historical units to create the Directorate of History (since 1998, the Directorate of History and Heritage). The department lured Colonel Charles P. Stacey, historian of the overseas army in 1941-1945 and head of the Army Historical Section until 1959, back from his new teaching career at the University of Toronto to set up the new organization. Stacey quickly established the production of a full scale history of the air force, the service whose program has suffered the greatest setbacks in the cuts of 1947-8, as the directorate's priority task.

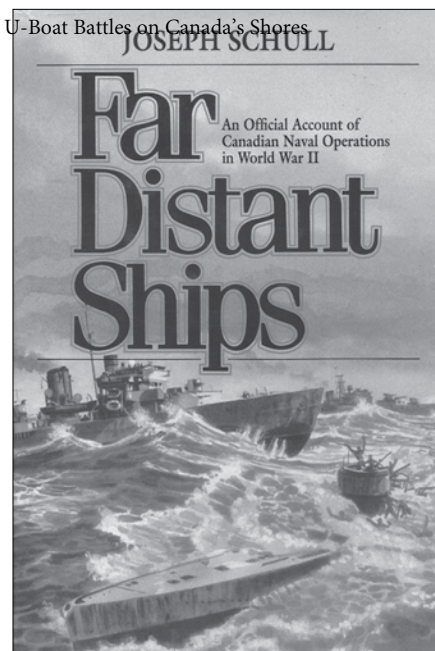
Stacey, who found the 1960s version of the government bureaucracy even more frustrating than his exasperating experiences in the 1950s, persuaded Sydney F. Wise to replace him as director of history in 1966. Wise, a professor of Canadian history at Queen's University, had co-authored one of the most successful textbooks of military history, and served in the RCAF during the war. He had started his academic career by using his veteran benefits to do a BA in history at the University of Toronto after he was demobilized from wartime service; he had then done graduate work at Queen's. The changeover from Stacey, who had been born in 1906, to Wise, born in 1924, marked a passing of the baton

from one generation to another.⁵ The last of the military officers with potential for senior positions whom Stacey had mentored as historians during the war and the 1950s had retired or were about to. Stacey recognized the central qualification for the job was historical expertise, and for that reason urged that future directors should be academics with administrative experience, engaged as civil servants.

In the system established by Stacey in the Army Historical Section and still in place in a somewhat modified form today, the historical team was coordinated and mentored by the "senior historian." That person was responsible for the preparation of drafts for the director's revision or his approval if another of the historians was to be the author of record.

Wise, in those days when academically trained military historians were very rare birds indeed, recruited as his senior historian a still rarer bird – a military officer with academic history qualifications. W.A.B. Douglas, who was born in 1929 in Southern Rhodesia (now Zimbabwe) and raised in England, had first come to Canada during the war as a child evacuee from the

Lieutenant-Colonel C.P. Stacey during his Second World War appointment as historian of the Canadian Army Overseas.



German bombing attacks on London. He returned to Canada, permanently as it turned out, shortly after the war when his widowed mother married a chaplain in the Canadian Army overseas. Douglas paid his way through an undergraduate degree at the University of Toronto by joining the University Naval Training Divisions, and then became a regular force officer. During a dull posting in Halifax, he enrolled at Dalhousie University to do an MA in history in his own time. His thesis was on the Royal Navy and Nova Scotia in the eighteenth century. During a subsequent posting in Kingston, he began a PhD, an expansion of his MA naval topic, under Wise's direction at Queen's. When Wise left the directorate for a professorship at Carleton University in 1973, Douglas retired from the armed forces to become director of history. By pure coincidence, the leadership of the directorate had thus passed from a former army officer to a former air force officer and then to a naval officer who had just got out of uniform.

Douglas, while working full time on the air force history, also pushed deeply into the history of the Canadian navy in the Second World War. The two were in fact complimentary. Douglas took on as



Flying Officer S.F. Wise, at RCAF Station Summerside, PEI, 1944.

lead author the volume of the air force history that dealt with the hitherto virtually unknown organizations and operations in Canada, 1919-1945. A central part of the story was the history of Eastern Air Command, especially its support to the navy in escorting convoys and hunting for enemy submarines in the western and central north Atlantic. (One grumpy staff historian grumbled that the early drafts of the Eastern Air Command chapters read like a naval history, with the occasional aircraft buzzing into the picture and then just as quickly buzzing out.) This work, in which German U-boat records and high level intelligence information – including new releases by Great Britain of “Ultra Top Secret” files of decrypted German naval signals – proved of vital importance, and revealed the limitations of *The Far Distant Ships*.

If the sturdily built, deep voiced Charles Stacey, with his square hands and clipped moustache, seemed the stereotypical army colonel, then the tall, athletic, swaggering Syd Wise was the embodiment of an air force pilot. Alec Douglas, as tall as Syd but slighter in build, courtly in manner with an accent Canadians call British and the British call mid-Atlantic, and a carefully swept thatch of hair

that has never, ever been cut short in anything approaching army style, is every inch the naval officer. And through the 1970s he promoted the cause of Canadian naval history – then virtually a non subject in the universities and popular literature, and a low priority in the defence department. He gave papers at academic conferences, spoke to naval veterans’ groups, assisted interested university professors and students, and urged the defence department to approve a fresh operational history of the navy in the Second World War. I was hired as a civil service historian by the directorate in May 1981 in the first position that was to be assigned to the new naval project.

Ogilvy Annex

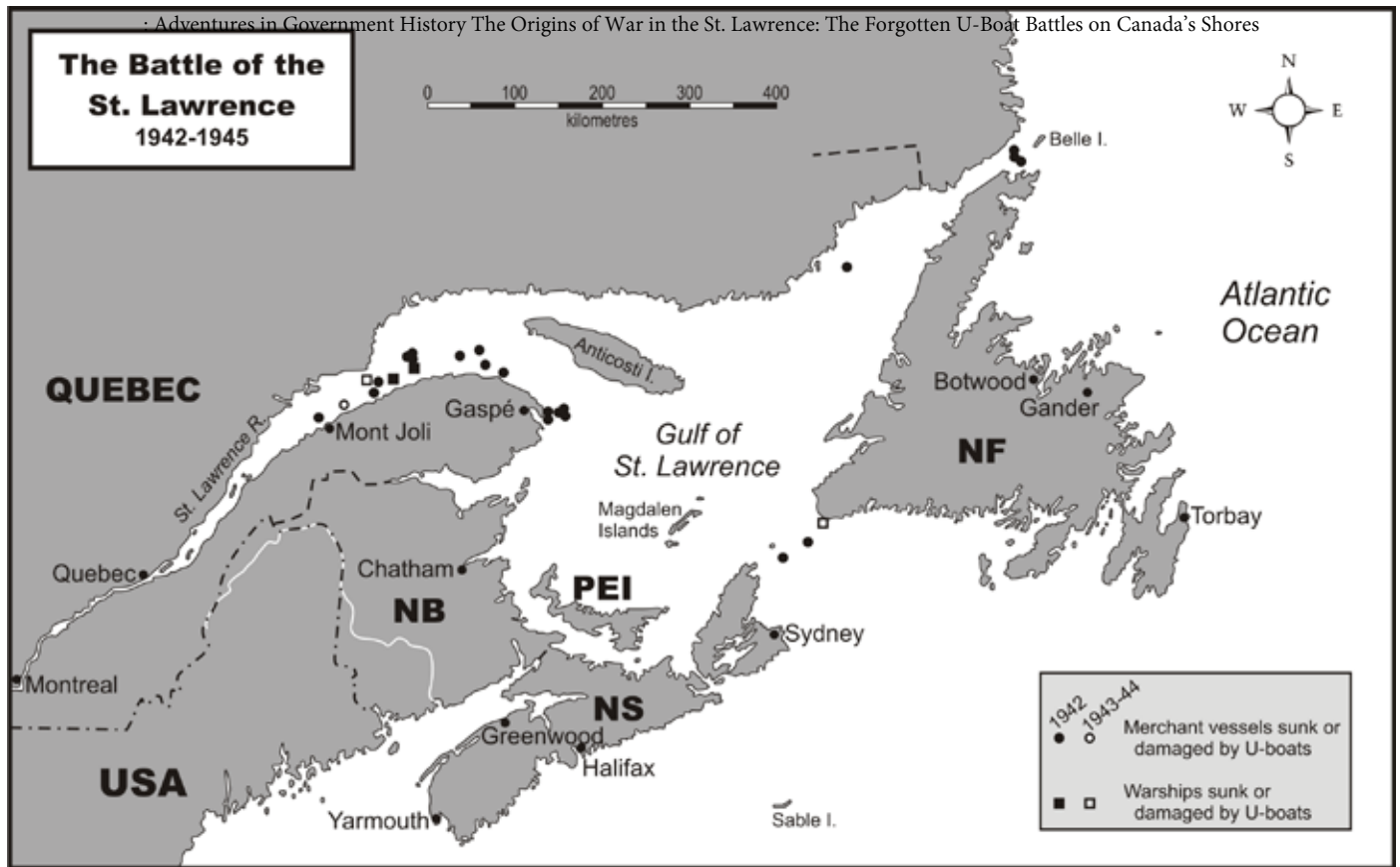
First-time visitors to the Directorate of History in the early 1980s were often wide-eyed or laughing. The wide-eyed - those suspicious of the secret workings of the defence establishment - wondered at what was “really” going on that had to be disguised by the incongruous facilities. Those who laughed sometimes referred to the opening sequence of the television comedy “Get Smart,” in which agent Maxwell Smart goes into an apparently innocuous phone booth, dials, and drops through a trap door to “CONTROL” headquarters, or the series “Man from UNCLE” in which the international intelligence agency’s offices were hidden above a tailor shop. The directorate, from the mid 1960s to the mid 1980s, was located on the third and fourth floors of the Ogilvy’s department store annex on the south-east corner of Besserer and Nicholas Streets in Ottawa. One entered the building through the large appliances and home wares departments and then got off the elevator on a floor that had the appearance of a movie set for a Second World War spy drama. The



W.A.B. Douglas, who has remained active in naval history since his retirement as director of history in 1994, shown here while lecturing in 2011.

offices were around the outer walls behind wooden partitions that went only two-thirds of the way to the ceiling and had smoked glass for the top two or three feet. The vast central space, some thousands of square feet, was filled with bank after bank of tall olive-drab file cabinets.

As the new kid, I got the old word processing technology, a high-bodied 1920s typewriter. The more senior hands got 1950s era typewriters, with a special feature that set the margins automatically. Only the secretaries – and the director himself – had state-of-the-art technology, IBM “Selectric” typewriters, with built-in correction tape. Some said the people were also a quirky mix. I always think of Captain Dick Morrison, a helicopter pilot with an aviator’s handlebar moustache and a love of English literature. McGill University turned down his proposal to do a PhD thesis on scatology in Shakespeare’s English. He was philosophical about the rejection – “Shitty subject,” he concluded. Then there was Dave Kealy, who had been a regular officer in the Royal Navy from the age of 13 in the early 30s, and had served in destroyers all through the Second World War before retiring and immigrating to Canada where



Map drawn by Mike Bechthold ©2012

he ultimately joined the Naval Historical Section. He always had his watch set for Greenwich Mean Time, Royal Navy style. At my job interview there had a bit of upset when Norman Hillmer, the current senior historian, objected to Brereton ("Ben") Greenhouse, the former senior historian, clipping his finger nails while we talked. Alec Douglas, who chaired the interview, gave me a long suffering look and sighed.

The incident was revealing of Ben and Norman. Ben, big and burly, was a native of Shropshire in the west of England, an area he liked to remind us whose location on the once violent Welsh borderlands had given its people a fighting (some said, thinking of Ben, cantankerous) spirit. Ben, who was a few years too young to have served in the Second World War, had done his compulsory national military service during the late 1940s as a non-commissioned officer in British Army intelligence. He had then served as an officer in the Malayan police and seen combat during the communist insurgency during the 1950s. Subsequently he

hiked across Afghanistan before permanently emigrating from England. His plan had been to go to New Zealand, but he fetched up in Ottawa. Carleton University welcomed him as a student, and he discovered his gift for historical research and writing.⁶ Norman Hillmer, by contrast, hailed from North Toronto. His father had been a senior official in the Toronto Board of Education, and Norman had embarked on a teaching career in the public school system before he did his PhD at Cambridge. He prided himself on his athletic physique and in summer often appeared at the office in tennis shorts and a suitably trendy polo shirt. When he announced that he had bought a Toyota Camry – then a little known new model – someone wondered aloud "But what car do Yuppies drive?" Alec immediately replied, "Well now it's a Camry." Norman took perverse delight in his unmilitary background – so much so that I only later came fully to appreciate the extent to which his historical career had blossomed when, in the 1960s, he was a student

of Charles Stacey's at the University of Toronto. He had in fact done his MA research, on Sir Robert Borden's naval policy, under Stacey's direction. Norman, an historian of international relations, downplayed this and his other notable achievements in military scholarship. During a staff seminar to review a draft chapter of the air force history, the question came up whether some material would be accessible to someone with no specialized military knowledge. Spontaneously we all turned to Norman – who beamed at the acknowledgement, and allowed, yes he understood the draft perfectly well. Norman and Ben, both masters of English style, ran something like a continuous writing seminar for the more junior staff, patiently annotating draft after draft – and suggesting yet another draft might finally achieve something approaching clarity and precision.

Although I was hired for the future naval history, the volume on the air force in Canada, 1919-45, had priority. As part of my training Alec asked me to look at the role

of Eastern Air Command in the battle of the St. Lawrence. It seemed a good way to get my feet wet without drowning. Alec and Dave Kealy had spent considerable time building analytical accounts⁷ from the extremely preliminary chronological "narrative" on the history of Eastern Air Command that had been prepared by the original air force historical team during and immediately after the war.⁸ Alec and Dave had their hands more than full with the largest and most important story: the role of Eastern Air Command in the main theatre of the Battle of the Atlantic, the sea routes between the major US and Canadian east coast ports and Great Britain. The material they had encountered on the air force's role in the gulf suggested that the air force, like the navy, had given the gulf a distant second priority after the defence of the transatlantic convoys that sustained Britain and built up the resources needed for the liberation of Europe in 1943-5. In fact, the role of the air force in the St. Lawrence seemed so limited that my assignment was to produce a research paper of no more than 30 double-spaced typed pages; I was to give the project half time for about three months. This was the beginning of an ever growing enterprise that would continue for some five years, and in the later stages, as we prepared the air force volume for press, become something more than a full-time commitment.

Almost immediately the subject took on a life of its own. It was indeed true that the air force had played a supporting role to the navy in the St. Lawrence. The navy, however, relied upon aircraft as the principal means for reinforcing the thinly-stretched warship escorts for gulf shipping, and more particularly for searching out the submarines and striking back at them while the few warships available "held the goal posts" close around the merchant ship convoys. During 1942, when

U-boats first attacked in the gulf, it became a leading commitment for Eastern Air Command, absorbing 40 percent and more of the command's flying effort despite its primary tasks in the protection of Atlantic convoys. Developments in the gulf confronted both the air force and navy leadership with the need more fully to integrate their services' efforts, and the St. Lawrence became something of a laboratory for the development of more effective cooperation between warships and aircraft in anti-submarine warfare.

In retrospect it is easy to say "we should have known" about the scale and importance of the air effort in the gulf. Peter Moon's account of Paul Hartwig's 1942 mission in *The Canadian Magazine* recounted Hartwig's memories – since fully confirmed by German documents – about how his U-boat had been relentlessly hunted by RCAF bombers, and very nearly destroyed. Moon's emphasis on Hartwig's success tended to downplay the air force's response, however. Writers and readers in the 1970s were by no means alone in this emphasis. In the 1980s I found the report of Hartwig's interrogation by British intelligence officers when he was captured following the destruction of his submarine by British forces in the eastern Atlantic in November 1942. The reaction of Canadian staff officers when they received this report early in 1943 was a sense of frustration and failure because the numerous attacks on Hartwig's boat had not destroyed it, or even broken the fighting spirit of the crew.⁹

What was missing in the 1970s, and of course in 1942-3, was context that could only come from German records and close co-relation of the information they contained with the most detailed reports available on Canadian air and naval operations. The salient point that emerged from that analysis was that Eastern Air Command reinforced and

reorganized its effort in response to the initial run of success by *U-517* and its consort, *U-165*, in late August and early September 1942. *U-165*, having exhausted its complement of torpedoes, headed for home on 16 September – and warned U-boat headquarters about the effective air cover.¹⁰ *U-517*, by contrast, was only half way through its six-week mission, but was unable, despite repeated and aggressive efforts, to make any further successful attacks. More than that, Eastern Air Command's new methods were instrumental in greatly limiting the success of three other submarines that immediately followed Hartwig into the gulf to the destruction of a total of only three ships, and persuaded a fourth U-boat not even to attempt to enter. Tragically, one of the three ships lost was the Newfoundland Railway ferry *Caribou*, destroyed by *U-69* on the night of 13-14 October 1942, while the passenger ship was making its regular crossing of the Cabot Strait between North Sydney, Cape Breton Island and Port-aux-Basques, Newfoundland. This disaster, in which 136 people perished, many of them women and children, confirmed for the public, the military and the government that the defence of the St. Lawrence was a failure. German records, however, added a vital additional element. *U-69* had in fact been driven from the St. Lawrence by Eastern Air Command's effective air patrols, and was lurking in the Cabot Strait so she could quickly escape into the safety of the open ocean.

More generally, it was not until Canadian and other researchers began to re-examine the whole history of maritime air power in the Second World War in the late 1970s and 1980s that two crucial elements of broader context became apparent. The first was the enormous technical difficulties encountered by Britain, then the leading maritime air power, and the United States air forces in aerial anti-submarine operations.



An RCAF Consolidated Canso or Catalina flying boat from the after deck of a Fairmile motor launch showing its depth charge armament, at Gaspé, June 1943. Fairmiles and Cansos/Catalinas based at Gaspé supported St. Lawrence convoys in the dangerous middle part of their passage where the narrow waters of the estuary allowed U-boats most readily to locate and attack shipping.

No air force was dependably able to destroy submarines until the latter part of 1942, and Eastern Air Command did as well as the larger Allied air forces. Second, it was only this fresh analysis of the larger Allied effort that established the special difficulties that Eastern Air Command faced. It was well behind the other Allied air forces in both modern equipment and trained personnel, the result of the Canadian air force – and the Canadian government – giving absolute priority to the recruitment and training of tens of thousands of personnel for the Royal Air Force's combat commands in Britain.

Still, how could Canada's large air effort in the gulf, one of the big stories of the war on Canada's shores, slip into such obscurity? One reason is that no one looked. When the RCAF official history program went on the

chopping block in the late 1940s, the only reasonably full account of Eastern Air Command was a very preliminary chronology assembled by a member of the wartime historical section to provide a basic reference for the authors of the official history volumes that were never written. The chronology, some 900 pages of legal-sized typescript pages in length, organizes each of the wartime years into four chapters, each covering a three-month period. The quarterly chapters in turn comprise sections on each of the command's bases and the squadrons at those bases. Most of the material is a "scissors and paste" compilation of extracts from the daily diaries kept by these units. These diaries vary widely in content and quality, depending entirely upon how the officer assigned the task chose to fill in the forms. Some

provided only a line on the weather conditions, and a bare-bones listing of the aircraft that flew. Others, who took the job more seriously, included notes on personnel posted or departing, training programs, digests of intelligence received on enemy operations, information on the purpose and results of each aircraft mission, and sometimes annexed copies of important orders and reports.

The greatest challenge in grasping the main threads from the diffuse chronological history derives from the very nature of air operations, and, in particular, air operations on Canada's east coast. The navy rather than the air force determined the shape of the maritime air campaign. It was the navy that controlled the merchant shipping that the enemy was endeavouring to attack. It was

the navy that gathered and analyzed intelligence about enemy threats. On that basis, it was the navy that planned and controlled operations.

The navy's fundamental defence measure for friendly shipping was to collect vessels together into convoys. Merchant ships sailing singly provided a string of vulnerable targets to the enemy. Submarines could hunt one ship and then another without fear of retribution. Even if the victim managed to radio for help, aircraft and warships usually could not reach the scene for at least an hour or more, ample time for the submarine quickly to run from the area, dive and wait till the coast was clear, once again free to seek out another target. If those same merchant ships were sailed together in a convoy, then escort warships and aircraft could be concentrated around that convoy. In order to sink merchant ships in convoy, the enemy submarines had to face those defending forces. The primary defence of a convoy was the group of warships that provided the "close escort." These vessels remained constantly with the convoy, day and night and in all weathers. The most senior warship commander, the "senior officer of the escort" directed all defence operations, including missions by aircraft dispatched by headquarters on shore to assist the convoy.

One of the greatest virtues of aircraft, their rapid mobility, also makes historical analysis of operations difficult. In the early 1940s a single squadron of ten or 15 aircraft could simultaneously undertake different missions in widely separated areas hundreds of miles from the squadron's home base. A single convoy, or a particular area where intelligence suggested a submarine might be lurking, might receive coverage by aircraft from two or more squadrons from two or more bases on a single day. If need be, aircraft from squadrons at

the larger bases could within hours fly to another station closer to the scene for detached operations that might continue for days or weeks, depending on enemy activity. In other words, a single air squadron, in contrast to army units and naval escort groups, was seldom assigned to carry out a complete operation of several days' or weeks' duration. It is often necessary to sift through the records of many squadrons with an eagle eye in order to discover among the scores or even hundreds of flights recorded (often in incomplete form) the air missions that supported a particular convoy. Moreover, to make any real sense of the air missions – why they were ordered and what they were expected to accomplish – it is necessary to track down the full naval records of that convoy.

There were, as it turned out, special opportunities, but equally frustrating obstacles, in carrying out this kind of research in the early 1980s. Incredible as it may seem, there was no published model of what the history of an air command engaged in the Battle of the Atlantic might look like. The British official history, *The War at Sea*, four fat volumes produced by Captain S.W. Roskill in 1954-61, told the stories of all the armed services engaged. As a result the treatment of the RAF's Coastal Command is merged in with the more extensive account of the Royal Navy's predominant role. The American published histories similarly do not give a focussed, detailed account but for different reasons. There was no separate American air force. The army and navy each had their own aviation branches, and maritime air operations receive brief treatment in the service histories. The Army Air Forces did produce their own six-volume official history, but, in the fall of 1942, the army turned its responsibility for shore-based maritime aviation over to the navy.

Fortunately, the British did produce a typescript history, "The

R.A.F. in Maritime War," for the internal use of the military staffs and as a supporting study for Captain Roskill's published official history. More fortunately still, "The R.A.F. in Maritime War" had been released to the archives in the 1970s. This massive, fully referenced study became one of the models for the Eastern Air Command chapters of the new RCAF official history. Significantly in light of the fact that the British, the pioneers in maritime aviation, had discovered that maritime air forces could only be effective if they operated under naval control, the author was Captain D.V. Peyton Ward, RN, the naval liaison officer to the RAF Coastal Command during the war.¹¹

Peyton Ward's work confirmed what the Canadian official historians had already discovered in writing the first volume of the RCAF official history in the late 1960s and 1970s, on the role of Canadian airmen in the British flying services during the First World War.¹² (Syd Wise was the senior author, and Alec Douglas undertook the work on maritime aviation.) Squadron and base records of the sort used for the Eastern Air Command narrative were useful mainly for specific detail. The information that would tell a coherent story could only be obtained in the records of major regional commands, and the national armed services ministries. These senior headquarters set policy and coordinated action for everything from the recruitment and training of personnel, to the acquisition of aircraft and other equipment, to the construction of base facilities, and development of tactical methods.

Some may imagine government records management in terms of lavish facilities that embody the commitment to preserve the saga of the nation. While it is true that governments devote more effort to records management than by almost any other agency, the effort

is never equal to the challenge, and impressive only in comparison to the neglect of records in most places at most times. People are far too busy with the consuming pressures of day to day life to give much thought to records; all too often at work, as at home, we tend to stuff old letters or invoices that have been paid into drawers or boxes in no particular order, and then chuck things out when the drawers begin to jam or the attic is chock-a-block. Much historical research, especially into areas that have been little studied – the research that is the most fun – bears a closer resemblance to the annual panic to find income tax receipts amidst the detritus at the bottom of the briefcase and in various kitchen drawers than to the caricature of the tweedy academic calmly perusing well ordered tomes. The neat thing about the Directorate of History in the early 1980s was that its row on row of musty cabinets created the atmosphere of a mystery-filled attic in a 1940s film-noir, while it truly did represent – and does so today with its updated archival shelving and acid-free documents boxes – management of paper records that is about as good as it gets.

The Eastern Air Command files that survived were all at the Directorate of History, in the banks of olive drab cabinets. These files are excellent, but selective and incomplete. The members of the original air force team that had arranged for their retention in the 1940s apparently chose only the most obviously significant items, attempting in the interest of economy to avoid excessive duplication by relying upon the files of Air Force Headquarters (AFHQ) in Ottawa as the primary record. Most the AFHQ files had been accessioned by the Public Archives (now Library and Archives Canada), meaning that they could be ordered from the archives reading room on Wellington Street, and delivered there within a matter of hours. The finding aids, excellent for the early 1980s, consisted of type-written or handwritten lists, arranged according to the original numbering of the files, and giving the title of the file. The lists run to hundreds of pages, and the only search engine was "by finger" – going through the lists page by page, entry by entry, and manually noting those of potential interest. As in any file system, the file titles capture the contents with

greatly varying degrees of accuracy, and it was therefore essential to err on the side of caution by calling up any item whose title suggested the faintest link with the research subject.

There were significant gaps in coverage by the files at the archives. Some of the missing items turned up in the Federal Records Centre, a warehouse at the Tunney's Pasture complex of federal government buildings in the west end of Ottawa where files that might still have information required for ongoing issues were stored under the physical charge of the archives, while remaining the property of the department that created them. Still others finally came to light in the file storage of the department under new numbers. Their subjects, such as a key file on the overall air defence of Canada, had a continuing relevance for policy, and therefore they had been renumbered according to recent filing systems. The files still under the department's control, at the Federal Record Centre and in the department's own storage, often proved the most difficult to find. There were no inventory lists, like those created by the Public Archives for the records it accessioned, and the only finding aids were the original index cards used by the contemporary records managers. Many of the cards consisted of scribbled notations used by clerks in filing incoming correspondence, and there were only one or two older members of the records management staff whose experience reached back far enough for them to be able, with considerable effort, to correlate the information on the cards to file storage locations. In the case of the main AFHQ subject file on the defence of the Gulf of St. Lawrence, we were able to track

Canadian Forces Photo PMR 77-385



U-517 crash dives as seen from Flying Officer Maurice Belanger's Lockheed Hudson during its attack run on 29 September 1942. The Gaspé coast is in the background.

U-165 under attack on 9 September 1942 by a Lockheed Hudson of 113 Squadron, piloted by Pilot Officer Robert S. Keetley.

down the original file control card, only to discover that the file had been reported missing sometime in the 1950s. It never did surface.

Because the maritime air operations supported the navy, and the navy's published operational history was based on research that was incomplete, there had to be extensive work in navy records as well. The extended chronological narrative on the Battle of the Atlantic that wartime naval historical officers had written, and Joseph Schull had used for *The Far Distant Ships*, has some of the same strengths and weaknesses as the Eastern Air Command narrative. It is less discursive than the air force chronology because of the navy's directing role in maritime operations that made salient events stand out more clearly. The historical officers were thus able to trim a good deal of detail about administrative matters and routine operations, the sort of bits and pieces that even while obscuring the main elements of the Eastern Air Command story provide insight into daily life and work-a-day problems at the command's bases.

The records of commanding officer Atlantic Coast (COAC), the regional navy command at Halifax that corresponded to Eastern Air Command, are voluminous. They had been saved in a nick of time by the Naval Historical Section in the mid-1960s when cutbacks that closed down the warehouses where they were stored had initially brought a program of wholesale destruction. In 1981 these files were just being accessioned by the archives and their structure and contents were largely unknown. Very large blocks of wartime files from Naval Service Headquarters (NSHQ) had been kept open and in use to the early 1960s,

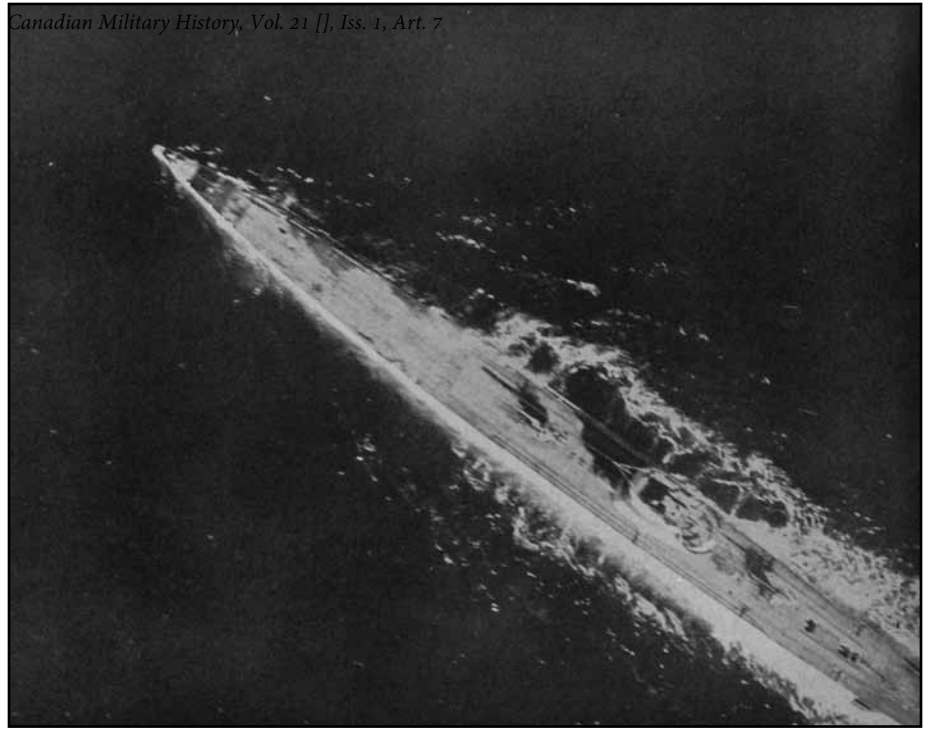
and these in the early 1980s were in the midst of transfer from DND and the Federal Records Centre to the archives. Even more than in the case of the Air Force Headquarters records, a good deal of time was required to discover which files still existed and what their general contents were.

Alec had three special interests for the Eastern Air Command chapters. What was the German side of the story, and in particular how effective or ineffective were Canadian operations from the German perspective? What intelligence was available to the Canadian forces and how did this information influence operations? Finally, what advanced technology did the Canadian forces possess, especially aircraft mounted anti-submarine radar in the case of Eastern Air Command, and how did it contribute to Canadian operations? These were the main elements missing from *The Far Distant Ships*, and for some years had been the basis of Alec's own research.

Faced with a subject I knew little about, and a mass of records that were entirely new to me, I searched for some sort of point of entry, some method of identifying what was important. The objective of Eastern

Air Command's operations in the Gulf of St. Lawrence was to prevent the U-boats from attacking shipping. The key task, therefore, was to find out precisely what impact the command's operations had on the enemy, and thus the essential first source was the German records. This approach focussed the seven month campaign in 1942, from May through November, to 22 events: the 12 occasions on which the submarines had successfully attacked shipping, and the ten occasions on which aircraft had made attacks in which there was good reason to conclude the target had been a U-boat, and not one of the many – countless – false contacts resulting from the large amounts of flotsam on the surface of the water in the gulf, and the frequent fogs and mists. These 22 events were a much more manageable research agenda than the hundreds of often poorly recorded flights Canadian aircraft had made in the gulf in support of over a hundred merchant ship convoys, whose records were also incomplete in many instances.

By the early 1980s we knew the identity of most of the U-boats that had operated in the gulf (those other than the famous *U-517*) and when they had operated there through



work by Professor-Doctor Jürgen Rohwer, director of the Library of Contemporary History in Stuttgart, Germany. Rohwer was a junior officer in the German navy during the war. He served in minesweepers, and as Allied ground forces closed in on his ship's base in the spring of 1945 he joined a group of seamen who organized themselves as an infantry unit and took to the countryside to fight the invaders. He had never surrendered to the enemy, bearing arms until the government of Hitler's successor, Admiral Karl Dönitz, capitulated. In his subsequent academic career he became one of the first non-government scholars to analyze the large body of U-boat records that survived the war. One of his projects was to correlate U-boat attack records with Allied shipping records to determine precisely which ships had been under attack, which attacks had been effective, and those that had missed.¹³ Rohwer was in correspondence with the Canadian Naval Historical Section in the early 1960s for assistance with his work on U-boat attacks in Canadian waters, and on transatlantic convoys that had been under Canadian escort. At the same time, he assisted the Canadian historians by helping to identify the U-boats that had been the target of attacks by Canadian forces.

Taking these 22 instances of confirmed contact with U-boats, I was able to push into the Canadian air and naval records with a series of questions. In the case of U-boat attacks on shipping, had there been an aircraft in the vicinity? If so, aircraft from which squadron, from what base, and what was the aircraft's mission? If the aircraft was operating on detached duty at a base within the gulf, when had that special detachment been established and why? If no aircraft was present why was that the case? Had air protection been ordered, and if so why had it not been provided? What was the response of Canadian

naval and air forces to the submarine attack? What reinforcements came, from what bases and with what orders? In the case of air attacks on U-boats, the questions were similar, but with additional ones about how the aircraft had located the U-boat. Did the aircraft have intelligence that a U-boat was in the area? What was the source of that intelligence? Was the aircraft equipped with radar, and did this help in making contact with the submarine? The great challenge was in building up as full a picture as possible of air operations on the days of the crucial events, and, to give essential context about the command's procedures and capabilities, on the days immediately preceding and following those events.

It quickly became apparent that in 1942 Eastern Air Command was still in the early stages of expansion. When the first U-boat struck in the gulf in May 1942, the command had only four fully organized anti-submarine squadrons equipped with modern aircraft; additional aircraft and aircrew were just arriving to re-equip a fifth squadron, and organize additional units. Even with the hastening of these efforts (a direct response to the appearance of submarines in the gulf as it turned out), the command was woefully short of aircraft and trained aircrew. For this reason, much of the flying in the gulf was done by aircraft sent for single missions from the main Atlantic coast bases, or special detachments of two or three bombing aircraft sent for a period of days or weeks to training airfields within the gulf or on the St. Lawrence River. Often the aircraft on detachment were rotated back to their home base for maintenance, and replaced by other aircraft, sometimes from the same squadron, sometimes from another unit.

This constant shuffle of individual aircraft or small detachments from many bases and squadrons in what were frequently

emergency conditions following a U-boat attack explained why the story of Eastern Air Command's role had for so long remained so obscure. There exists no consolidated source recording missions in the gulf and detachments to temporary bases in the gulf. Certainly there are valuable passages in the Eastern Air Command narrative history, and in the base and squadron diaries upon which the narrative was largely based, but these are buried in other material covering the whole range of the command's activities. Even these passages are not necessarily complete or fully accurate.

Without realizing it, I was getting a particularly clear lesson about one of the basic rules of research into military operations. The most dependable sources are signals exchanged by radio, or, in the case of headquarters by telegraph or teletype, by participants during the event. In the Canadian air force and navy these messages were typed by communications staff at the various headquarters onto pink forms some six to eight inches in length and eight inches wide with the originator and recipients at the top. Right after the text was the precise time (to the minute) and date the originator sent the message, which served as its reference number. At the bottom of the form were one or two time-date groups which indicated when the addressee received the message, and, if it was in cypher, when it was decyphered. The advantage of the messages as a source is that by definition they record precisely what was known by participants during the course of the events. A squadron or base war diary might well have been written up days after the event by an officer who may not have been privy to all the details; even if he had been, his account would inevitably be coloured by his knowledge about how things turned out, and by the practical need to select and condense material for the written account. The

principles of research into military operations are thus virtually identical to those of police investigations or legal proceedings: the best evidence is that directly from participants gathered as close to the event as possible.

The first important breakthrough in the project was the discovery that Eastern Air Command (EAC) sent a daily signal of several pages in length to the Air Ministry in Britain and AFHQ, listing all missions flown that day, missions ordered that had been cancelled or curtailed by weather or equipment defects, and, a list of missions ordered for the following day. The latter was of particular importance for it gave a fair indication where the command suspected U-boats were operating, and thus what intelligence was available. No single complete collection of these signals exists, but a reasonably full run can be pieced together from various dockets that survive in the AFHQ records at the archives and in EAC records at the Directorate of History. Some dockets, however, report areas patrolled in a letter code for which a key no longer exists, making it impossible to discern which flights were in the gulf. In these cases, the better squadron diaries and weekly and monthly reports helped fill in the information. In all cases, the signals reported flights by squadron, not mission, so there was no alternative but to go through each page, line by line, to identify missions over the gulf.

The main work for my initial gulf report was to build a list of all missions in the gulf, for the periods in which there were confirmed contacts with the U-boats. For each mission listed, I endeavoured to identify the aircraft, its squadron, the base it was operating from, the time it took off, the time it landed, and geographical area the patrol covered, and, course, as much information as I could find on any special occurrence during

the flight, particularly an actual or possible sighting of a U-boat.

Naval records, the essential context for the air missions, also had to be stitched together from many places. Naval Service Headquarters maintained master files of convoy reports, but as a space saving measure these were microfilmed in the early 1950s and the originals destroyed. Few of the files are complete. There were many series of coastal convoys in Canadian waters, on the Atlantic coast as well as in the gulf, most of which were established as an emergency response to U-boat attacks so arrangements, including record keeping, were necessarily improvised and informal. Many of the signals were barely legible file copies, and are unreadable on the microfilm. Fortunately, the Naval Historical Section saved two filing cabinets of signals held by the Trade Division of NSHQ, the office of the naval staff that oversaw the organization of all convoys. Again, the quality of the file copies is poor, but most can be deciphered. At the archives some reports missing from the microfilms turned up in scattered files in the COAC collection.

The greatest pleasure of the work, aside from the excitement of new discoveries, was the collegial atmosphere. A group of six or seven historians would gather for coffee breaks and brown-bag lunches to share findings and frustrations. Regular participants who mentored my efforts included M.V. "Vince" Bezeau (who was working on Western Air Command), Carl Christie (Ferry Command, and operations from Newfoundland), Owen Cooke (archivist), Ben Greenhous (British Commonwealth Air Training Plan), and Steve Harris (air force policy).¹⁴ The spirit of collaboration also came from the bosses, Norman Hillmer who supervised the research and was the overall editor of the volume, and Alec Douglas, the senior author, who received our edited reports from

Norman. The whole team, with Alec in the chair, met in seminar to review newly completed reports, and Alec and Norman closely consulted the authors of reports about how their work was being trimmed and shaped for the final chapters.

Far from telling me to wrap things up, Alec and Norman asked me to pursue leads. In the end, my report on Eastern Air Command in the St. Lawrence in 1942 took over a year of part-time work to complete, and filled 117 typescript pages. Nor was that the end of it. The final section of the report detailed how the dramatic sinking of ships close to Canadian soil had created such alarm among the population, and consternation for the military and the government, that the development of more effective defences for the gulf became a top priority for the 1943 shipping season. There was little German activity in Canadian waters that year, and indeed the main story was how Eastern Air Command extended its operations far into the central and eastern Atlantic successfully to engage U-boats in some of the most important convoy battles of the war. During 1944, however, the U-boats returned in strength to Canadian waters. They achieved far fewer sinkings than in 1942, but they continued to destroy warships and merchant ships right up until the last weeks of the war. Two of the most dramatic submarine attacks were again in the gulf: severe damage to the frigate HMCS *Magog* by *U-1223* on 14 October 1944, and the destruction of the corvette HMCS *Shawinigan* with the loss of all 91 members of her crew by *U-1228* on the night of 23-24 November 1944.

Alec asked me to carry on with the gulf story in 1943-5. It did not look like a promising subject. During the period August to December 1944 when the U-boats renewed the offensive in the St. Lawrence, aircraft did not make a single confirmed sighting of a submarine, let alone an



HMCS *Magog* under tow after the frigate was hit by a torpedo from U-1223 on 14 October 1944. The explosion demolished the 20-metre-long after section of the hull. Note the buckled remnants of the upper deck of the stern part of the ship, folded over top of the surviving superstructure.

attack. Yet, aircraft were extremely active in the gulf. In an effort to relate this flying effort to the U-boat patrols, I plotted the areas covered by the aircraft each day against the tracks of the submarines. Work in the German records to produce these plots soon showed why the aircraft made no contacts. So great was the threat from land-based aviation that submarines ran almost continuously submerged when in North American coastal waters during the latter part of 1944 and early 1945. Because of well-founded fears that Allied radio direction-finding stations could locate the source of transmissions and quickly home aircraft to the position, the Germans operated in radio silence. While U-boats were still crossing the central ocean they exchanged signals with headquarters to receive their orders for North American coastal operations, and the submarines rarely signalled again until they had completed their mission and withdrawn back out into the central ocean. As a result the actual daily positions in the U-boat logs are in many cases quite different from the estimated positions shown in the diary kept at U-boat headquarters, which often had no word of a submarine's progress for several weeks.

In the Canadian records there were two exciting finds. In the

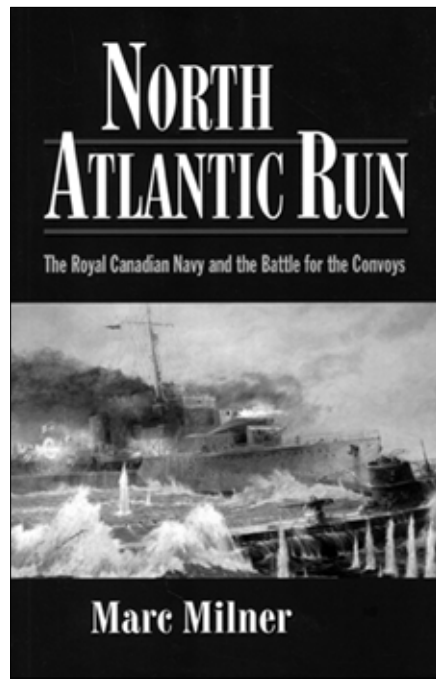
summer of 1943 the newly expanded Operational Intelligence Centre at Naval Service Headquarters began to issue to the east coast commands a high classified daily signal code-named "Otter." It listed U-boats operating in the western Atlantic, and the areas where each might be patrolling for the next 24 hours. The daily operations reports signals from Eastern Air Command showed that the missions ordered for air patrols were to cover the areas identified in the Otter signals. Most strikingly, for many days the estimated U-boat positions given in the Otter signals corresponded to the estimated positions in the U-boat headquarters diary. We knew from the early releases by the British archives of material on Ultra intelligence that after the blackout through much of 1942, the British had managed to break into U-boat radio traffic once more, and, with American assistance, were subsequently able to decrypt many signals within a matter of a few hours. Could it be that Naval Service Headquarters in Ottawa was receiving Ultra intelligence, and this was the basis of the Otter signals? There were a few instances in the Otter signals that provided more definite clues. Normally the Otter signals were dispatched in the evening to allow east coast staffs time to plan and order missions for the next

day. On a few occasions special Otter signals went out at other times of the day with an urgent amendment to one of the estimated U-boat positions dispatched the previous evening. On checking the German sources I found that on several of these occasions U-boat headquarters had sent new instructions to U-boats already on patrol in North American waters. The timing of these signals was only hours before a corresponding special Otter signal. Alec, who in joint projects with Jürgen Rohwer had undertaken some of the first detailed academic work on the role of Ultra intelligence in the battle of the Atlantic, knew the British sources thoroughly. Fortunately, decrypts of U-boat signals for the latter part of the war had just been released to the archives. Alec took the list of the special Otter signals to the UK archives, and discovered that in each case the British had indeed promptly decrypted the U-boat headquarters tasking signals we had located in the German records. These discoveries left no doubt that Ottawa was immediately receiving the latest Ultra decrypts and quickly analyzing them for the direction of Canadian operations.

The basic research on 1943-5 revealed that German operations in Canadian waters were on a larger scale than had been previously known. There were five U-boats who patrolled in the Gulf of St. Lawrence in the late summer and fall of 1944, a scale of effort that matched the 1942 campaign. This was part of broader effort in Canadian and Newfoundland waters that during the period October 1943 to May 1945 included extended patrols in coastal areas by more than 20 German submarines. During these months shipping traffic from Canadian ports, including the St. Lawrence, was particularly heavy to support the build up of troops, equipment and supplies in Great Britain for the Allied invasion of France at

Normandy on 6 June 1944, and then to sustain the advance by the Allied forces into Germany. Yet, in contrast to 1942, the U-boats sank or damaged only three ships in the St. Lawrence. The discovery about the importance of "Otter" signals in the gulf – to keep aircraft on constant patrol over top of the probable positions of U-boats revealed as we now suspected by Ultra intelligence – provided a clue about how the Canadian forces held the submarines at bay.

Alec asked me in 1983 to work up drafts for the whole of Eastern Air Command during the last 18 months of the war using the Otter signals and the Ultra signals released by the British. The results were fascinating. During 1942, when no Ultra intelligence had been available, the Canadian forces had been blind. Most often the first firm intelligence about the arrival of a new U-boat in Canadian waters, or the movement of a boat from one zone to another was the sudden destruction of merchant ships. By contrast, starting in the fall of 1943, the RCAF's new "very long range" Consolidated Liberator four-engine bombers, based at Gander, Newfoundland, began to overfly the suspected U-boat tracks when the submarines were still hundreds of miles out in the ocean, just beginning the approach towards Canadian waters. Other aircraft from other bases took over as the U-boat entered their area, the baton being passed from base to base. When warships were available, or when, as rarely happened, the U-boat revealed its exact position by attacking or making a radio signal, the Canadian forces organized joint air-sea hunts. On every occasion in which the U-boats managed to attack, it turned out that efforts to keep air and sea patrols over the tracks of the submarines had gone awry because of a failure in Ultra intelligence, or because the U-boat commander had not followed his orders and deviated far from the plot kept by U-boat headquarters – and



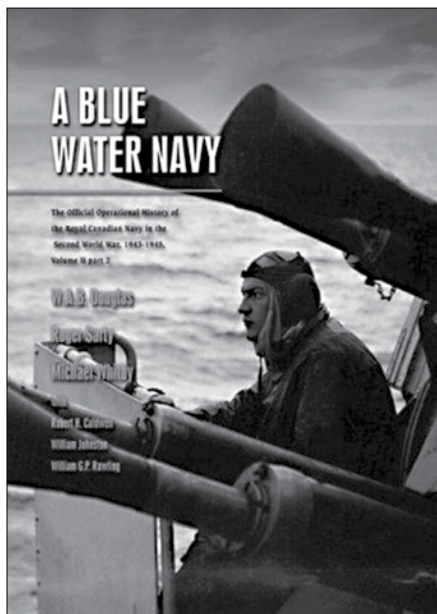
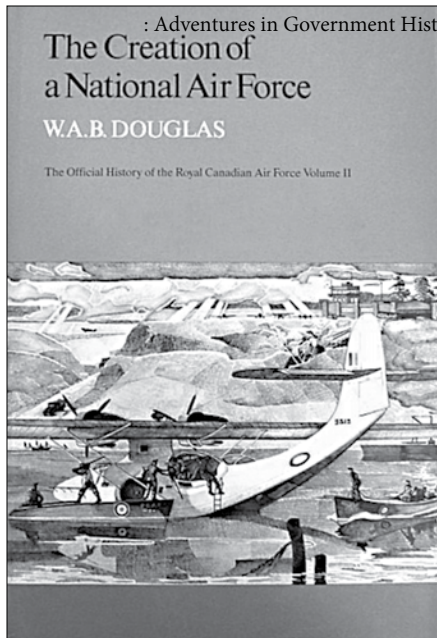
the Allied intelligence staffs whose U-boat plots were by that stage in the war as good and in some cases better than the Germans' own.

The work in feeding the new intelligence research and analysis into the Eastern Air Command chapters of the official history of the RCAF in 1983-5 was particularly exciting because it figured directly in the "renaissance" of Canadian naval history. I now had a partner in the project, Marc Milner. Marc hails from Sackville, New Brunswick, and I knew we had a true mariner on staff when he came in late one morning and announced "Bin to the dentist. He cleaned my teeth – and my wallet." I'm told Marc and I have certain maritime traits in common: barrel chest and a constitutional inability to keep a shirt tucked in, a lot of hand gestures while talking, fly away hair (still the case with Marc, but mine has mostly departed during the intervening decades), and a way of slurring words that isn't quite the most beautiful Queen's English. Alec not infrequently got us mixed up, I think at one point to referring to Roger Milner, but I can't swear to that. Marc had recently completed his PhD thesis, the first account of

the Royal Canadian Navy in the Battle of the Atlantic that drew on the full archives opened in the 1970s in Canada, Britain and the United States. That was the basis of his first book, *North Atlantic Run: The Royal Canadian Navy and the Battle for the Convoys, 1939-43*, published in 1985.

Alec, Marc and I all were in regular touch with Michael Hadley, a professor of German literature at the University of Victoria and a captain in the naval reserve. Michael, in the early 1980s, combined his interests in a study of the U-boats that operated in Canadian waters during the war. He was in contact with several of the surviving U-boat commanders, and shared stories with us of his encounters with the German veterans, together with copies of the wartime documents they provided him. Michael's *U-Boats against Canada* appeared in 1985, at the same time as Marc's book. They did a combined book-launch tour, but I think Marc was on his own in his native New Brunswick where he was the guest on a phone-in radio talk show. This should have been a moment of glory for a down-homer who had done good in Upper Canada – with the University of Toronto Press, no less. This is Marc's account, as well as I can recall it after 24 years. Caller: "So you live up there in Ottawa now?" Marc: "Yes." Caller: "So you know a lot of big people up there?" Marc: "I, er..." Caller: "Well I want you to give a message to that Brian Mulroney..."

In 1986, the year after Marc Milner's and Michael Hadley's books were published, Alec Douglas's *The Creation of a National Air Force: The Official History of the Royal Canadian Air Force Volume II* came out. It is a hefty tome of 797 pages. About a quarter of the book, six chapters, tell the story of Eastern Air Command. The Gulf of St. Lawrence campaign of 1942 had been elevated to a chapter of its own, and the operations in 1944 got part of another chapter. It was these chapters, informed by the



work of Hadley, Milner, Rohwer and others, that provided the first account of the battle of the St. Lawrence to be built from the full range of archival records. The maritime chapters in the air force history, as intended, subsequently became the basis for the fuller account in the new official history of the navy, which got under way in 1987. In an uncanny repetition of history, deep cuts in the defence budget stalled the naval project during the last half of the 1990s, and delayed publication of the Second World War volumes until 2002 and 2007.¹⁵ The chapters on the St. Lawrence in those tomes reflect considerable additional research, and raised issues for further work. Still, when I sat down in 2008 to begin *War in the St. Lawrence*, and dug through the boxes of files and note cards accumulated in fits and starts over nearly three decades, I realized that it was the experience at the directorate in the early eighties that laid the foundation and provided the inspiration for the new book. Time and again I felt once more the excitement of discovery of that early research. One of the main objectives in writing the new book was to try to capture that excitement.

Notes

1. Roger Sarty, *War in the St. Lawrence: The Forgotten U-Boat Battles on Canada's Shores* (Toronto: Allen Lane, 2012).
2. Peter Moon, "The Second World War Battle We Lost At Home," *Toronto Star*, *Canadian Magazine*, 26 February 1972, pp.2-7.
3. Joseph Schull, *The Far Distant Ships: An Official Account of Canadian Naval Operations in the Second World War* (Ottawa, King's Printer, 1950), pp.114-20; Gilbert Norman Tucker, *The Naval Service of Canada: Its Official History. Volume II: Activities on Shore* (Ottawa: King's Printer, 1952), pp. 391-2.
4. C.P. Stacey, *A Date With History: Memoirs of a Canadian Historian* (Ottawa: Deneau, [1983]), chapter 14; Tim Cook, *Clio's Warriors: Canadian Historians and the Writing of the World Wars* (Vancouver: UBC Press, 2006), chapters 4-5.

5. W.A.B. Douglas, "Sydney F. Wise, 1924-2007: A Personal Recollection," *Canadian Military History* 16, no.3 (Summer 2007), pp.75-80.
6. Ron Csillag, "Brereton Greenhous, Historian 1929-2005," *The Globe and Mail*, 14 May 2005.
7. For example, J.D.F. Kealy, "Coastal Command Narrative," 3 pts., May 1974-January 1976, Directorate of History and Heritage [DHH]. Dave had been promoted to senior inquiries officer around the time of my arrival, and I, in effect, took over the remaining work on Eastern Air Command; he was a splendid and kind mentor, among many at the directorate.
8. [Air Force Historical Section,] "The History of Eastern Air Command," [1945], 4 pts., DHH 74/2.
9. Admiralty, Naval Intelligence Division, "U-517, Interrogation of Crew," BR 1907 (55), DHH 80/520, pt. 16; Rear-Admiral L.W. Murray, commander-in-chief, Canadian Northwest Atlantic, "Defence of the Gulf of St. Lawrence Appreciation," 14 May 1943, Library and Archives Canada, Record Group 24, vol.11064, file 38-2-1A.
10. U-boat headquarters war diary, 16-17 September 1942, DHH 79/446.
11. Great Britain, Air Ministry, Air Historical Branch, "The R.A.F. in Maritime War," DHH 79/599; Roskill, *War at Sea*, I, p.xxii.
12. S.F. Wise, *Canadian Airmen and the First World War: The Official History of the Royal Canadian Air Force Volume I* (Toronto: University of Toronto Press and the Department of National Defence, 1980).
13. Jürgen Rohwer, *Axis Submarine Successes 1939-1945* (Annapolis, MD: Naval Institute Press, 1983).
14. For a full list of the team that supported Alec Douglas in the production of *The Creation of a National Air Force* see the volume's preface.
15. W.A.B. Douglas, Roger Sarty, and Michael Whitby with Robert H. Caldwell, William Johnston and William G.P. Rawling, *The Official Operational History of the Royal Canadian Navy in the Second World War, Volume II*, in two parts (St. Catharines, ON: Vanwell Publishing and the Department of National Defence, 2002-2007).

Roger Sarty embarked on his career in 1981, as a junior historian at the Directorate of History. He moved to the Canadian War Museum in 1998, where he was head of the Exhibition Development and Historical Research Division, and joined the History Department at Wilfrid Laurier University in 2004.